

GENERAL LOCATION OF CONTRACT

PREPARED BY
DELDOT - TRANSPORTATION SOLUTIONS
BRIDGE DESIGN

Jonathan Tice
11/23/2020
DATE

THIS SEAL APPLIES TO ALL SHEETS
BEARING THE "BR" SECTION DESIGNATION.

SEAL

PREPARED BY

Walter A. Mudroch
11/30/2020
DATE

THIS SEAL APPLIES TO ALL SHEETS
BEARING THE "UEI" SECTION DESIGNATION.

SEAL

THE STATE OF DELAWARE
DEPARTMENT OF TRANSPORTATION



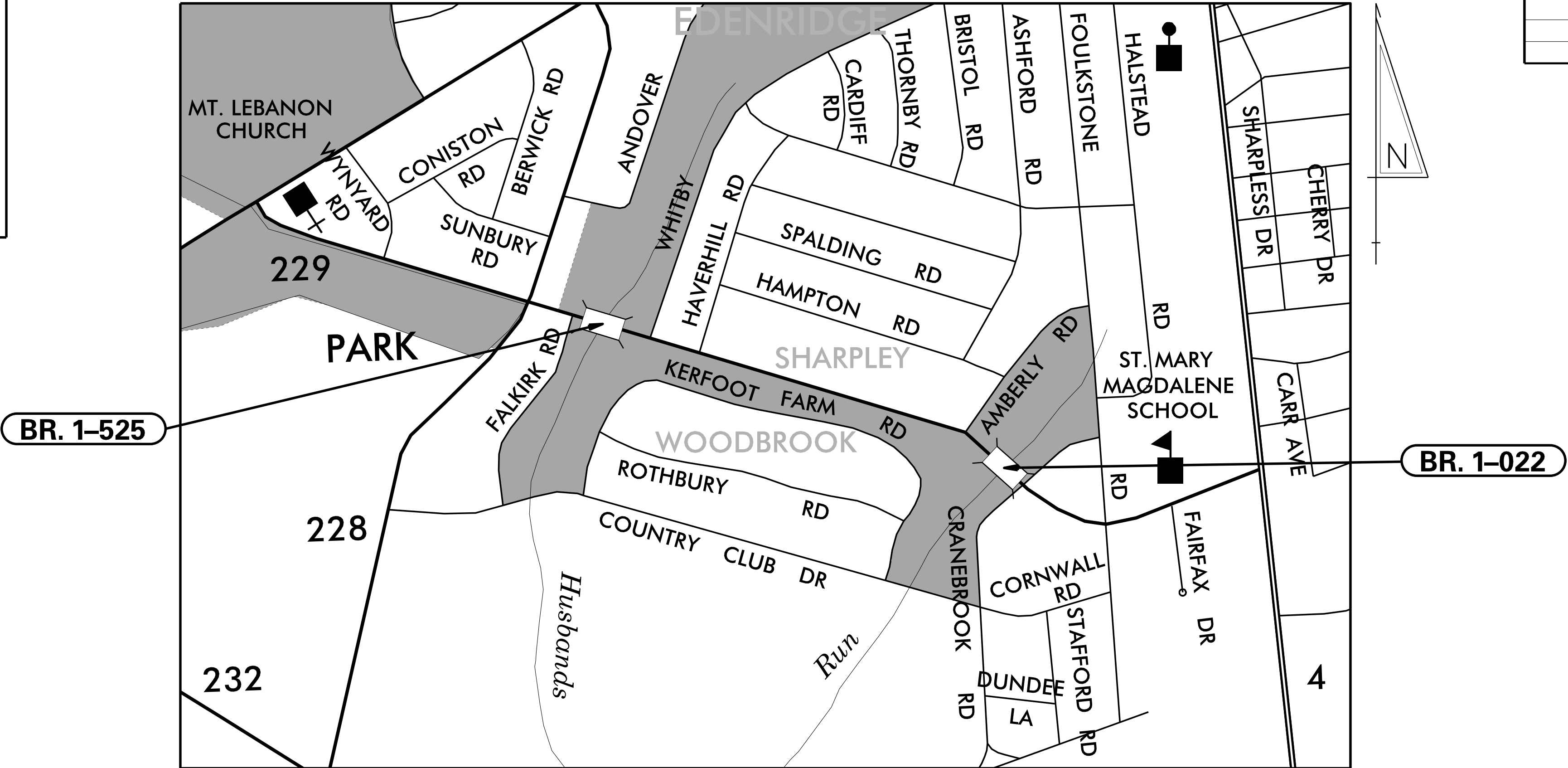
CONSTRUCTION & RIGHT-OF-WAY PLANS FOR:
BR 1-022 AND BR 1-525
ON
SHARPLEY ROAD
CONTRACT NUMBER: T201807103
FEDERAL AID PROJECT NUMBER: EBROS-N229(01)
COUNTY: NEW CASTLE M.R. #: N229

U.S. CUSTOMARY
UNITS

DESIGN DESIGNATION			
MRD #: N229	ROAD NAME: SHARPLEY ROAD		
FUNCTIONAL CLASS: URBAN MAJOR COLLECTOR		D.H.V. PROJECTED: 168	YEAR: 2040
TYPE OF CONSTRUCTION: BRIDGE REPLACEMENT		DESIGN SPEED: 40 MPH	
A.A.D.T. CURRENT: 1438	YEAR: 2016	TRUCKS: 4%	
A.A.D.T. PROJECTED: 1700	YEAR: 2040	DIRECTION OF DISTRIBUTION: 60 %	
APPROVED DESIGN EXCEPTIONS			
DESIGN PARAMETER	REQUIRED	PROVIDED	DATE
RATE OF VERTICAL CURVATURE, K	64	40	11/23/2020
ADDENDA /REVISIONS			

APPROVED FOR ADVERTISEMENT

Shirley
DIRECTOR OF TRANSPORTATION SOLUTIONS
12/02/2020
DATE



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ADDENDA / REVISIONS		NOT TO SCALE

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BR 1-022 AND 1-525 ON SHARPLEY ROAD

CONTRACT	BRIDGE NO.	1-022 & 1-525
T201807103	DESIGNED BY: MAH	
COUNTY	CHECKED BY: JAT	
NEW CASTLE		

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	SHEET NO.
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ADDENDA / REVISIONS		SCALE NOT NOTED	BR 1-022 AND 1-525 ON SHARPLEY ROAD	CONTRACT	BRIDGE NO.	1-022 & 1-525	ADDENDA AND REVISIONS	SECTION
				T201807103	DESIGNED BY: MAH			BR
				COUNTY				SHEET NO.
				NEW CASTLE	CHECKED BY: JAT	3		

EXISTING SYMBOLS

DRAINAGE	
	DITCH OR STREAM CENTERLINE
	DIRECTIONAL STREAM FLOW ARROW
	DRAINAGE INLET
	DRAINAGE JUNCTION BOX
	DRAINAGE MANHOLE
	DRAINAGE PIPE AND FLOW ARROW
	DRAINAGE PIPE HEADWALL
	RIPRAP - AREA FEATURE
	RIPRAP - LINEAR FEATURE

MANMADE ROADSIDE FEATURES	
	BOLLARD - STEEL POLE
	BOLLARD - WOOD POST
	CURB
	CURB AND GUTTER
	FENCE - CHAINLINK OR STRANDED
	FENCE - STOCKADE OR SPLIT RAIL
	FLAG POLE
	GUARDRAIL - STEEL BEAM
	GUARDRAIL - WIRE ROPE
	LAMP AND POST - RESIDENTIAL
	MAILBOX
	PARKING METER AND POST
	PAVEMENT - FLEXIBLE
	PAVEMENT - RIGID
	PILE - BRIDGE
	PILLAR OR MISCELLANEOUS POST
	TRAFFIC SIGN AND POST
	WALL - BRICK OR BLOCK
	WALL - STONE

NATURAL ROADSIDE FEATURES	
	GRASS LAWN
	HEDGEROW OR THICKET
	MARSH BOUNDARY LINE
	TREE - CONIFEROUS
	TREE - DECIDUOUS
	TREE STUMP
	SHRUBBERY
	DELINEATED WETLAND BOUNDARY LINE
	WOODS LINE BOUNDARY

RIGHT-OF-WAY SYMBOLS	
	PROPERTY MARKER - CONCRETE MON.
	PROPERTY MARKER - IRON PIPE
	HISTORIC RIGHT-OF-WAY BASELINE
	EXISTING RIGHT-OF-WAY
	EXISTING PROPERTY LINE
	EXISTING EASEMENT
	EXISTING DENIAL OF ACCESS
	EXISTING R/W & DENIAL OF ACCESS

SURVEY CONTROL & MONUMENTATION	
	SURVEY BENCHMARK LOCATION
	SURVEY TIE POINT LOCATION
	SURVEY TRAVERSE POINT
	POINT OF CURVATURE OR TANGENCY
	POINT OF INTERSECTING TANGENTS

UTILITY	
	SOIL BORING LOCATION
	UTILITY TEST HOLE LOCATION
	CABLE TV DISTRIBUTION BOX
	ELECTRIC MANHOLE
	ELECTRIC METER
	ELECTRIC TRANSFORMER
	POLE MOUNTED LUMINAIRE
	GAS MANHOLE
	GAS METER
	GAS VALVE
	GAS PUMP - SERVICE STATION
	RAILROAD TRACKS
	SANITARY SEWER MANHOLE
	SANITARY SEWER VALVE
	SANITARY SEWER CLEANOUT OR VENT
	SEPTIC DRAIN FIELD
	TELEPHONE BOOTH
	TELEPHONE MANHOLE
	TELEPHONE TEST POINT
	TRAFFIC - CONDUIT JUNCTION WELL
	TRAFFIC - LIGHT POLE AND BASE
	TRAFFIC - PEDESTRIAN POLE & BASE
	TRAFFIC - SIGNAL CABINET & BASE
	TRAFFIC - SIGNAL POLE AND BASE
	UTILITY BOX
	UTILITY POLE GUY WIRE ANCHOR
	UTILITY POLE
	WATER - FIRE HYDRANT
	WATER METER
	WATER VALVE
	WELL HEAD
	MANHOLE - UNDETERMINED OWNER

UTILITY COMPANY FACILITIES	
	DELMARVA POWER - ELECTRIC
	DELMARVA POWER - ELECTRIC
	NEW CASTLE COUNTY - SEWER
	DELMARVA POWER - GAS
	CITY OF WILMINGTON - WATER
	VERIZON
	COMCAST

(X) REPRESENTS ASCE DEFINED SUE QUALITY LEVEL

PROPOSED SYMBOLS

CONSTRUCTION	
	CONCRETE SAFETY BARRIER - PERMANENT
	BIOFILTRATION SWALE
	BRICK PATTERNED SURFACE
	BUTT JOINT
	CLEAR ZONE
	CONSTRUCTION BASELINE
	CONSTRUCTION SAFETY FENCE
	CURB, TYPE 1 & TYPE 3
	CURB, TYPE 2
	CURB & GUTTER, TYPE 1
	CURB & GUTTER, TYPE 2
	CURB & GUTTER, TYPE 3
	CURB & GUTTER, TYPE 4
	CURB OPENING - SUMP / ON GRADE
	CURB OPENING WITH SIDEWALK
	DRAINAGE INLET
	DITCH
	FENCE - METAL / FENCE - WOOD
	FLARED END / SAFETY END SECTION
	GUARDRAIL, TYPE 1
	GUARDRAIL, TYPE 2
	GUARDRAIL, TYPE 3
	GUARDRAIL END ANCHORAGE
	GUARDRAIL END TREATMENT, TYPE 1
	GUARDRAIL END TREATMENT, TYPE 2
	GUARDRAIL END TREATMENT, TYPE 3
	IMPACT ATTENUATOR
	JUNCTION BOX - DRAINAGE
	LATERAL OFFSET
	LIMIT OF CONSTRUCTION
	MAILBOX
	MANHOLE
	PAVEMENT PATCH
	PAVEMENT REMOVAL - TOPSOIL, SEED AND MULCH
	PIPE & DIRECTIONAL FLOW ARROW
	RIPRAP
	P.C.C. SIDEWALK - 4"
	P.C.C. SIDEWALK - 6" (USE 8" DEPTH FOR CHANNELIZATION ISLANDS.)
	UNDERDRAIN
	UNDERDRAIN OUTLET

RIGHT-OF-WAY SYMBOLS	
	PROPOSED RIGHT-OF-WAY MONUMENT
	PROPOSED DENIAL OF ACCESS
	PROPOSED PERMANENT EASEMENT
	PROPOSED RIGHT-OF-WAY
	PROPOSED R/W & DENIAL OF ACCESS
	RIGHT-TO-ENTER
	TEMPORARY CONSTRUCTION EASEMENT
	PROPOSED RIGHT-OF-WAY BASELINE

IDENTIFIERS	
	ADJUST BY CONTRACTOR
	ADJUST BY OTHERS
	CONCRETE SAFETY BARRIER
	CURB OR CURB & GUTTER
	CONVERT TO JUNCTION BOX
	CONVERT TO DRAINAGE MANHOLE
	CURB OPENING - SUMP / ON GRADE
	CURB OPENING WITH SIDEWALK
	PEDESTRIAN CONNECTION / TYPE WITHOUT SIDEWALK SURFACE DETECTABLE WARNING SYSTEM
	CONSTRUCTION SAFETY FENCE
	DRAINAGE INLET
	DO NOT DISTURB
	ENERGY DISSIPATOR
	FENCE
	FLARED END SECTION
	FILL WITH FLOWABLE FILL
	FILTRATION STRUCTURE
	GUARDRAIL
	JUNCTION BOX
	MANHOLE
	MONUMENT - RIGHT-OF-WAY
	PIPE
	RELOCATE BY CONTRACTOR
	RELOCATE BY OTHERS
	RELOCATE BY PROPERTY OWNER
	REMOVE BY CONTRACTOR
	REMOVE BY TRAFFIC CONTRACTOR
	REMOVE BY OTHERS
	SAFETY END SECTION
	UNDERDRAIN / LENGTH
	UNDERDRAIN OUTLET PIPE

LANDSCAPING	
	LANDSCAPE PLANTINGS
	SHRUBBERY
	CONIFEROUS TREE
	DECIDUOUS TREE

TRAFFIC	
	ITMS CONDUIT
	SIGNAL CONDUIT
	CONDUIT JUNCTION WELL
	LUMINAIRE
	PAVEMENT MARKINGS
	PAVEMENT STRIPING
	TRAFFIC SIGN

PAVEMENT SECTION(S)	
	MILLING AND OVERLAY PAVEMENT - 2" MILL 2" OVERLAY
	RECONSTRUCTED PAVEMENT - SEE TYPICAL SECTIONS FOR MATERIALS AND DEPTHS
	DRIVEWAY AND ENTRANCE PAVEMENT - SEE NOTES FOR MATERIALS AND DEPTHS

UTILITY COMPANY FACILITIES	
	CITY OF WILMINGTON - WATER
	DELMARVA POWER - GAS
	DELMARVA POWER - ELECTRIC
	VERIZON
	VERIZON
	COMCAST
	COMCAST

ADDENDA / REVISIONS

NOT TO SCALE

BR 1-022 AND 1-525 ON SHARPLEY ROAD

CONTRACT

T201807103

COUNTY

NEW CASTLE

BRIDGE NO.

1-022 & 1-525

DESIGNED BY: MAH

CHECKED BY: JAT

LEGEND

SECTION

BR

SHEET NO.

4

GENERAL NOTES

1. THIS PROJECT IS TO BE CONSTRUCTED IN ACCORDANCE WITH THE DELAWARE DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS", DATED AUGUST 2016 AND THE DELAWARE DEPARTMENT OF TRANSPORTATION "STANDARD CONSTRUCTION DETAILS", DATED 2017, INCLUDING ALL REVISIONS UP TO THE DATE OF ADVERTISEMENT.

()	NONE
(X)	ASCII DATA FILES WITH COORDINATES AND ELEVATIONS FOR PROPOSED POINTS AS SELECTED BY THE ENGINEER.
(X)	ALL PLAN SHEETS, IN PDF FORMAT.
()	EXISTING DIGITAL TERRAIN MODEL, IN .DTM FILE FORMAT, COMPATIBLE WITH SOFTWARE CURRENTLY USED BY DELDOT.
()	PROPOSED DIGITAL TERRAIN MODEL, IN .DTM FILE FORMAT, COMPATIBLE WITH SOFTWARE CURRENTLY USED BY DELDOT.
()	DESIGN FILE, IN .DGN FILE FORMAT, CONTAINING ONLY THE PROPOSED 3D TRIANGLES OF THE PROPOSED DIGITAL TERRAIN MODEL (DTM).

NOTE: THE DOCUMENT ENTITLED "RELEASE FOR DELIVERY OF DOCUMENTS IN ELECTRONIC FORM TO A CONTRACTOR" MUST BE SIGNED BY ALL PARTIES PRIOR TO THE DELIVERY OF ANY ELECTRONIC PROJECT FILES.

NOTE: THERE MAY BE SOME AREAS OF THE PROJECT NOT INCLUDED IN THE ELECTRONIC DESIGN DATA FILE(S). IT IS THE CONTRACTOR'S RESPONSIBILITY TO REVIEW THE DESIGN DATA FILE AND DETERMINE THE LIMITS OF THE PROJECT INCLUDED.

(X)	CROSS SECTIONS (WILL BE MADE AVAILABLE TO THE AWARDED CONTRACTOR)
(X)	RIGHT-OF-WAY PLANS (INCLUDED IN PLANS)

4. SIDEWALK WORK HAS NO ENVIRONMENTAL PERMITS ASSOCIATED WITH THIS PROJECT. AS SUCH, AN ENVIRONMENTAL COMPLIANCE SHEET WAS NOT PREPARED FOR THE SIDEWALK PORTION OF THIS PROJECT.

PROJECT NOTES

SECTION 100

1. ANY DAMAGE TO ITEMS NOTED TO BE RELOCATED OR RESET BY THE CONTRACTOR, AT THE DISCRETION OF THE ENGINEER, SHALL BE REPAIRED AND/OR REPLACED IN KIND AT THE CONTRACTOR'S EXPENSE.
2. THE CONTRACTOR WILL CONTACT THE DELAWARE TMC AT 302-659 4600 PRIOR TO ANY UNMANNED AIRCRAFT VEHICLE (UAV) FLIGHTS. THE CONTRACTOR WILL BE REQUIRED TO PROVIDE THE FOLLOWING INFORMATION: THE REGISTRATION NUMBER OF THE UAV, THE FLIGHT TIME, LOCATION OF THE FLIGHT, THE PILOT'S NAME AND THE PILOT'S CONTACT NUMBER DURING THE FLIGHT.

SECTION 200

3. ITEMS TO BE REMOVED UNDER ITEM 211000 - REMOVAL OF STRUCTURES AND OBSTRUCTIONS SHALL INCLUDE, BUT NOT BE LIMITED TO THE FOLLOWING:
- a. REMOVAL OF AN EXISTING 14' X 5'-7½" MULTI-PLATE ARCH IN ITS ENTIRETY AT EACH LOCATION.
 - b. REMOVAL OF STONE HEADWALL AND METAL RAILING AT EACH LOCATION.
 - c. REMOVAL OF CEMENT RUBBLE MASONRY SLOPES AT EACH LOCATION.
 - d. REMOVAL OF EXISTING CONCRETE DRAINAGE PIPES WHERE NOTED.
 - e. REMOVAL OF MANHOLE WHERE NOTED.
 - f. REMOVAL OF DRAINAGE INLETS WHERE NOTED.
 - g. REMOVAL OF CAPPED OFF GAS PIPE AT EACH LOCATION.
 - h. REMOVAL OF CAPPED OFF WATER LINE AT EACH LOCATION.
 - i. REMOVAL OF ABANDONED BURIED VERIZON LINES.

SECTION 400

4. THE PAVEMENT SECTION FOR FLEXIBLE PAVEMENT RESIDENTIAL DRIVEWAYS SHALL BE 2" BITUMINOUS CONCRETE, TYPE 'C' OVER 8" GRADED AGGREGATE BASE COURSE, TYPE 'B', UNLESS OTHERWISE NOTED ON THE PLANS.

SECTION 600

5. PORTLAND CEMENT CONCRETE:
USE PORTLAND CEMENT CONCRETE FOR CAST-IN-PLACE ELEMENTS AS FOLLOWS:
(f'c = 28-DAY COMPRESSIVE STRENGTH)
CLASS A - (PARAPET ITEM #610008), (f'c = 4.5 ksi)
CLASS A - (CONCRETE ENCASEMENT ITEM #610020), (f'c = 4.5 ksi)
6. USE PORTLAND CEMENT CONCRETE FOR PRECAST ELEMENTS AS FOLLOWS:
(f'c = 28-DAY COMPRESSIVE STRENGTH)
RIGID FRAME - (ITEM #612001), (f'c = 5.0 ksi)
WINGWALLS - (ITEM #612010), (f'c = 5.0 ksi)
DRAINAGE PIPES - (ITEM #601012, #601014, #601015)
-CHAMFER ALL EXPOSED EDGES ¾" UNLESS OTHERWISE NOTED.
7. BAR REINFORCEMENT:
-REINFORCING STEEL SHALL CONFORM TO AASHTO M31 (ASTM A615), GRADE 60.
-REINFORCING STEEL SHALL HAVE A 3" CLEAR COVER IF CAST AGAINST EARTH OR A 2" CLEAR COVER ELSEWHERE, UNLESS OTHERWISE SPECIFIED ON THE PLANS.
-ALL REINFORCING STEEL SHALL BE PROTECTED WITH FUSION BONDED EPOXY. EPOXY COATED REINFORCING STEEL SHALL CONFORM TO ASTM A775.
-ANY FIELD CUTTING OR FIELD BENDING MUST BE APPROVED BY THE ENGINEER. PAYMENT SHALL BE INCIDENTAL TO THE BAR REINFORCEMENT ITEM.
-GALVANIZED REINFORCING STEEL MAY BE SUBSTITUTED FOR EPOXY-COATED REINFORCING STEEL AT NO ADDITIONAL COST TO DELDOT WITH APPROVAL OF THE BRIDGE DESIGN ENGINEER.
-WELDING OF REINFORCEMENT DURING FABRICATION OR CONSTRUCTION IS NOT PERMITTED UNLESS SPECIFIED.
8. CONCRETE SEALER:
REFER TO DIAGRAMS CONTAINING CONCRETE SEALER LIMITS ON SHEETS 16 AND 21. PAYMENT SHALL BE INCIDENTAL TO ITEM #613001 - SILICONE BASED ACRYLIC CONCRETE SEALER.

9. STATION AND ELEVATION DATA GIVEN FOR DRAINAGE STRUCTURES ARE TO BE APPLIED TO THE CENTER OF THE GRATE FOR INLETS AND TO THE CENTER OF THE STRUCTURE FOR JUNCTION BOXES AND MANHOLES.

SECTION 700

10. WHERE PROPOSED CONCRETE SIDEWALK IS CONSTRUCTED TO MEET EXISTING SIDEWALK, THE EXISTING SIDEWALK SHALL BE SAWCUT AT THE TIE-IN POINT OR MEET THE NEAREST EXISTING SIDEWALK JOINT. ALL SAW CUTTING SHALL BE FULL DEPTH, UNLESS OTHERWISE NOTED ON THE PLANS OR DIRECTED BY THE ENGINEER AND SHALL BE PAID FOR UNDER ITEM 762001 - SAWCUTTING, CONCRETE, FULL DEPTH.
11. IN AREAS WHERE PROPOSED CURB MEETS EXISTING CURB AND THE TWO CURB TYPES ARE NOT SIMILAR, THE PROPOSED CURB SHALL BE TRANSITIONED IN 10 LINEAR FEET, UNLESS OTHERWISE DIRECTED BY THE ENGINEER. PAYMENT FOR THIS WORK, INCLUDING SAW CUTTING EXISTING CURB SHALL BE INCIDENTAL TO THE PROPOSED CURB ITEM.
12. SAWCUTTING:
ALL PAVED AREAS TO BE RECONSTRUCTED OR WIDENED SHALL BE SAWCUT AT THE POINT WHERE THE NEW PAVEMENT IS TO TIE INTO THE EXISTING PAVEMENT. ALL ITEM #762000 - SAW CUTTING, BITUMINOUS CONCRETE SHALL BE FULL DEPTH, UNLESS OTHERWISE NOTED ON THE PLANS, OR AS DIRECTED BY THE ENGINEER.

SECTION 800

13. MAINTENANCE OF TRAFFIC:
MAINTENANCE OF TRAFFIC SHALL BE AS PER DETOUR PLAN. THE DETOUR SHALL REMAIN IN EFFECT UNTIL THE FINAL WARM MIX IS PLACED. ALL MOT ITEMS WITH THE EXCEPTION OF ITEM #803001 - PORTABLE CHANGEABLE MESSAGE SIGNS, ITEM #811007 - FLAGGERS AND ITEM #811016 - FLAGGERS OVERTIME WILL BE INCLUDED IN ITEM #801500 - MAINTENANCE OF TRAFFIC, ALL INCLUSIVE.

SECTION 900

14. THIS PROJECT IS COVERED UNDER AN NPDES GENERAL PERMIT FOR CONSTRUCTION. UNDER THE GENERAL PERMIT, COMPLIANCE WITH DELDOT'S APPROVED SEDIMENT AND STORMWATER MANAGEMENT PLANS WILL CONSTITUTE COMPLIANCE WITH THE NPDES INDUSTRIAL PERMITTING REQUIREMENTS FOR THIS CONSTRUCTION PROJECT. A COPY OF THE NPDES GENERAL PERMIT AND NOI IS KEPT ON FILE IN EACH OF THE CONSTRUCTION OFFICES AND THE DEPARTMENT'S STORMWATER SECTION. A COPY OF THE GENERAL PERMIT OR THE NOI CAN BE OBTAINED UPON REQUEST FROM EITHER THE DEPARTMENT'S STORMWATER ENGINEER OR THE APPROPRIATE CONSTRUCTION ENGINEER.

MISCELLANEOUS

15. THE CONTRACTOR SHALL NOTIFY DART FIRST STATE AT DOT_DETOURS@DELAWARE.GOV AT LEAST 14 DAYS PRIOR TO THE START OF ANY DETOURS OR CONSTRUCTION, AND DOT_DTC_PROJECTDEVELOPMENT@DELAWARE.GOV AT SUCH TIME THE FACILITY IS COMPLETED AND OPERABLE FOR TRANSIT OPERATIONS. FOR EMERGENCY DETOUR INFORMATION ONLY, PLEASE CONTACT DTC'S CHIEF SCHEDULER AT 302-576-6019.
16. DESIGN SPECIFICATIONS:
a. DELDOT BRIDGE DESIGN MANUAL, 2017 EDITION
b. AASHTO LRFD BRIDGE SPECIFICATIONS, 2014, 7TH EDITION, CUSTOMARY U.S. UNITS INCLUDING 2015 AND 2016 INTERIMS.
c. PROVIDE MATERIALS AND PERFORM WORK IN ACCORDANCE WITH THE DELDOT STANDARD SPECIFICATIONS, AUGUST 2016. INCLUDING ALL REVISIONS UP TO THE DATE OF ADVERTISEMENT.
17. HYDRAULIC DATA:
BR 1-525
- | | | | |
|-----------------------------|----------------|-----------------------------|--------------|
| DRAINAGE AREA: | 0.38 sq. miles | DESIGN FREQ: | 50 YEARS |
| DESIGN DISCHARGE: | 438 cfs | 100-YEAR DISCHARGE: | 493 cfs |
| EXISTING 50-YEAR WSE: | 328.52 ft | PROPOSED 50-YEAR WSE: | 326.65 ft |
| EXISTING 50-YEAR VELOCITY: | 10.40 fps | PROPOSED 50-YEAR VELOCITY: | 6.55 fps |
| EXISTING 100-YEAR WSE: | 328.85 ft | PROPOSED 100-YEAR WSE: | 327.08 ft |
| EXISTING 100-YEAR VELOCITY: | 10.37 fps | PROPOSED 100-YEAR VELOCITY: | 7.09 fps |
| EXISTING WATERWAY OPENING: | 61.85 sq. ft | PROPOSED WATERWAY OPENING: | 75.43 sq. ft |

- BR 1-022
- | | | | |
|-----------------------------|----------------|-----------------------------|--------------|
| DRAINAGE AREA: | 0.24 sq. miles | DESIGN FREQ: | 50 YEARS |
| DESIGN DISCHARGE: | 455 cfs | 100-YEAR DISCHARGE: | 505 cfs |
| EXISTING 50-YEAR WSE: | 322.70 ft | PROPOSED 50-YEAR WSE: | 320.81 ft |
| EXISTING 50-YEAR VELOCITY: | 9.19 fps | PROPOSED 50-YEAR VELOCITY: | 6.32 fps |
| EXISTING 100-YEAR WSE: | 322.93 ft | PROPOSED 100-YEAR WSE: | 321.35 ft |
| EXISTING 100-YEAR VELOCITY: | 9.20 fps | PROPOSED 100-YEAR VELOCITY: | 7.01 fps |
| EXISTING WATERWAY OPENING: | 61.85 sq. ft | PROPOSED WATERWAY OPENING: | 87.00 sq. ft |

18. SCOUR ANALYSIS:
BR 1-525
- | | |
|-------------------------------|--|
| SCOUR DESIGN EVENT: 200 | |
| SCOUR DESIGN FLOOD DISCHARGE: | 525 cfs |
| SCOUR DESIGN FLOOD VELOCITY: | 7.39 fps (AT BRIDGE OUTLET) |
| WATER SURFACE ELEVATION: | 327.34 ft (IMMEDIATELY UPSTREAM OF BRIDGE) |

- BR 1-022
- | | |
|-------------------------------|--|
| SCOUR DESIGN EVENT: 200 | |
| SCOUR DESIGN FLOOD DISCHARGE: | 529 cfs |
| SCOUR DESIGN FLOOD VELOCITY: | 7.35 fps (AT BRIDGE OUTLET) |
| WATER SURFACE ELEVATION: | 321.72 ft (IMMEDIATELY UPSTREAM OF BRIDGE) |

SCOUR COUNTERMEASURES HAVE BEEN DESIGNED FOR THE SCOUR DESIGN FLOOD IN ACCORDANCE WITH HEC 23 - BRIDGE SCOUR AND STREAM INSTABILITY COUNTERMEASURES AND HEC 14 - HYDRAULIC DESIGN OF ENERGY DISSIPATORS FOR CULVERTS AND CHANNELS.

19. UTILITIES:
IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE THE CITY OF WILMINGTON WATER LINE. ALL PERMITS OBTAINED FOR THIS CONTRACT WILL APPLY TO THE WATER LINE RELOCATION.

IT IS THE RESPONSIBILITY OF THE INDIVIDUAL UTILITY COMPANY(IES) WORKING AT THIS PROJECT LOCATION TO OBTAIN ALL THE REQUIRED PERMITS/AUTHORIZATIONS FROM THE APPROPRIATE MUNICIPAL, COUNTY, STATE AND FEDERAL REGULATORY AGENCIES FOR AUTHORIZATION OF THEIR WORK. THE ENVIRONMENTAL PERMITS CITED IN THESE PLANS DO NOT AUTHORIZE ANY PART OF THE UTILITY WORK ASSOCIATED WITH THIS PROJECT.

DPL GAS WILL INSTALL AT EACH LOCATION; TWO VALVES, ONE ON EACH SIDE OF THE BRIDGE, ABANDON THE SEGMENT OF 4" STEEL PIPE WITHIN THE BRIDGE CONSTRUCTION LIMITS AND CAP THE PIPE ON BOTH SIDES. ONCE THE RIGID FRAME IS IN PLACE, DPL GAS WILL RETURN TO INSTALL THE 8" STEEL CASING AND 4" POLY CARRIER PIPE AND RECONNECT THE GAS MAIN AT THE TWO PREVIOUSLY PLACED 4" VALVES. REFERENCE UTILITY STATEMENT FOR ADDITIONAL DETAILS.

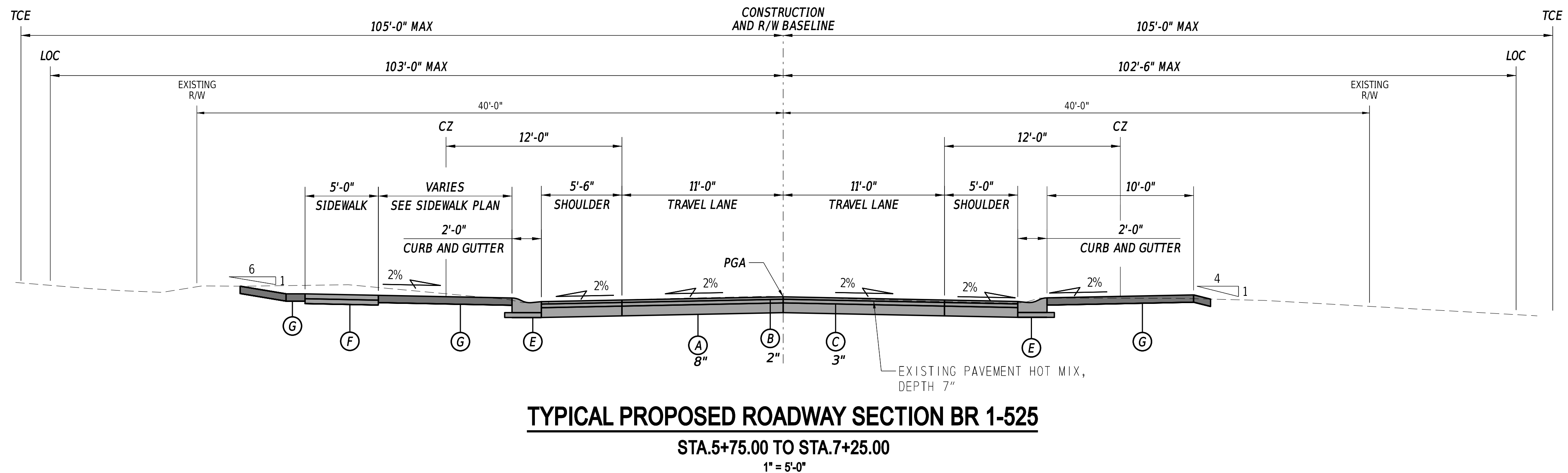
SEE UTILITY STATEMENT AND UTILITY RELOCATION PLAN SHEETS FOR FURTHER INFORMATION ON UTILITY COORDINATION.

20. ENVIRONMENTAL COMPLIANCE:
REFER TO THE ENVIRONMENTAL COMPLIANCE PLAN FOR RESTRICTIONS AND ADDITIONAL GUIDANCE THAT MAY BE ASSOCIATED TO THIS PROJECT.
21. TREES MARKED FOR ADJUSTMENTS MAY REQUIRE TREE TRIMMING TO MEET PEDESTRIAN ACCESSIBILITY STANDARDS. THE PAYMENT OF TREE TRIMMING WILL BE INCIDENTAL TO ITEM #201000.
22. REFER TO THE TYPICAL SECTION SHEET FOR THE LOCATION OF THE CLEAR ZONE LIMITS.
23. ADJUSTING THE WATER METER WILL BE PAID BY ITEM #719992 - ADJUST WATER VALVE BOX.

Load Rating Summary 1-525					
Vehicle Type	Rating Factor	Rating Weight (tons)	Controlling Member	Controlling Point	Load Effect
HL-93 Truck (Inventory)	1.48	53.44	Culvert	105	Flexure
HL-93 Tandem (Inventory)	1.20	30.08	Culvert	100	Flexure
HS20 (Inventory)	1.48	53.44	Culvert	105	Flexure
HL-93 Truck (Operating)	1.92	69.28	Culvert	105	Flexure
HL-93 Tandem (Operating)	1.56	39.02	Culvert	100	Flexure
HS20 (Operating)	1.92	69.28	Culvert	105	Flexure
DE S220	2.86	57.11	Culvert	105	Flexure
DE S335	1.50	52.54	Culvert	100	Flexure
DE S437	1.50	54.83	Culvert	110	Flexure
DE T330	2.86	85.66	Culvert	105	Flexure
DE T435	2.03	70.95	Culvert	100	Flexure
DE T540	2.03	81.07	Culvert	100	Flexure

Load Rating Summary 1-022					
Vehicle Type	Rating Factor	Rating Weight (tons)	Controlling Member	Controlling Point	Load Effect
HL-93 Truck (Inventory)	1.22	43.92	Culvert	105	Flexure
HL-93 Tandem (Inventory)	1.06	26.62	Culvert	105	Flexure
HS20 (Inventory)	1.22	43.92	Culvert	105	Flexure
HL-93 Truck (Operating)	1.58	56.94	Culvert	105	Flexure
HL-93 Tandem (Operating)	1.38	34.50	Culvert	105	Flexure
HS20 (Operating)	1.58	56.94	Culvert	105	Flexure
DE S220	2.35	46.93	Culvert	105	Flexure
DE S335	1.33	46.45	Culvert	105	Flexure
DE S437	1.37	50.38	Culvert	105	Flexure
DE T330	2.35	70.39	Culvert	105	Flexure
DE T435	1.79	62.73	Culvert	105	Flexure
DE T540	1.79	71.73	Culvert	105	Flexure

ADDENDA / REVISIONS		NOT TO SCALE	BR 1-022 AND 1-525 ON SHARPLEY ROAD	CONTRACT	BRIDGE NO.	1-022 & 1-525	NOTES	SECTION
				T201807103				BR
				COUNTY	DESIGNED BY: MAH			SHEET NO.
				NEW CASTLE	CHECKED BY: JAT			5



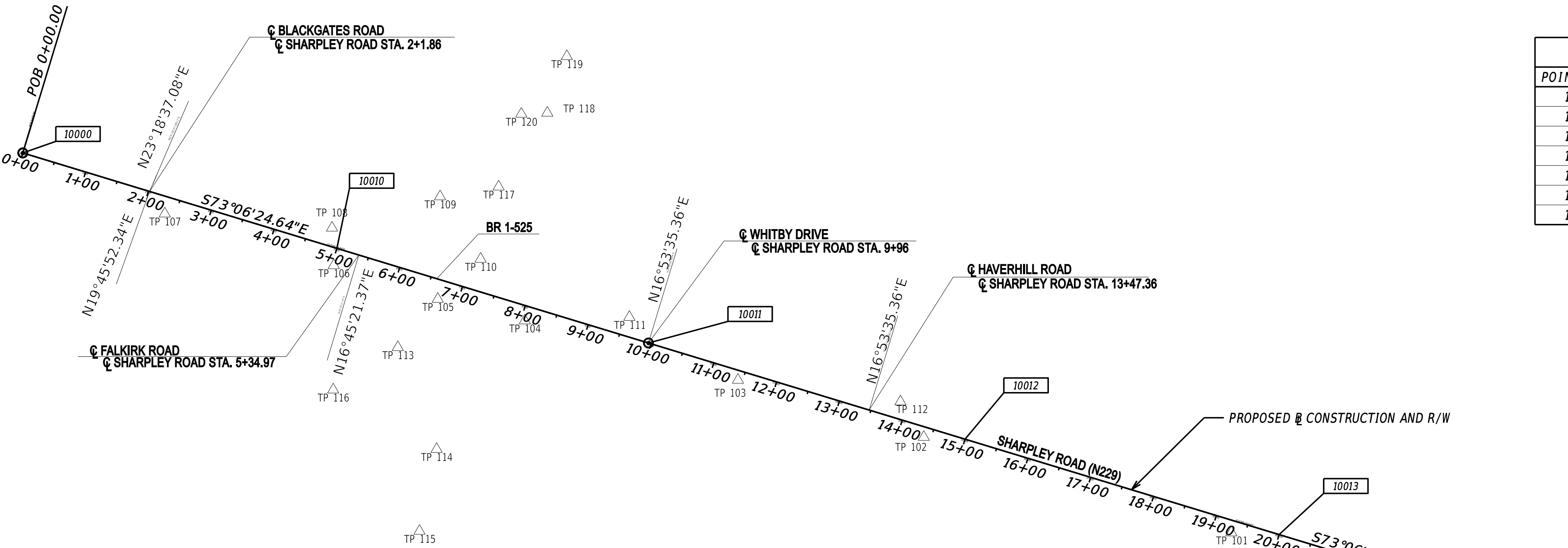
LEGEND

(A)	ITEM 301001 - GRADED AGGREGATE BASE COURSE, TYPE B
(B)	ITEM 401005 - BITUMINOUS CONCRETE SUPERPAVE, TYPE C, PG 64-22 (CARBONATE STONE)
(C)	ITEM 401014 - BITUMINOUS CONCRETE SUPERPAVE, TYPE B PG 64-22
(D)	ITEM 701016 - INTEGRAL PORTLAND CEMENT CONCRETE CURB AND GUTTER, TYPE 1-4 GRADED AGGREGATE BASE COURSE, TYPE B, 4"
(E)	ITEM 701019 - INTEGRAL PORTLAND CEMENT CONCRETE CURB AND GUTTER, TYPE 2 GRADED AGGREGATE BASE COURSE, TYPE B, 4"
(F)	ITEM 705001 - PORTLAND CEMENT CONCRETE SIDEWALK, 4" GRADED AGGREGATE BASE COURSE, TYPE B, 4"
(G)	ITEM 908004 - TOPSOIL, 6" ITEM 908019 - STREAMBANK SEED MIX ITEM 908020 - EROSION CONTROL BLANKET MULCH

MATERIAL	LIFT THICKNESS	
	MINIMUM	MAXIMUM
BITUMINOUS CONCRETE, TYPE 'C'	1.25"	2"
BITUMINOUS CONCRETE, TYPE 'B'	2.25"	4"
BITUMINOUS CONCRETE BASE COURSE	3"	6"
GRADED AGGREGATE BASE COURSE	--	8"

ADDENDA / REVISIONS		SCALE AS NOTED	BR 1-022 AND 1-525 ON SHARPLEY ROAD	CONTRACT	BRIDGE NO.	1-022 & 1-525	TYPICAL SECTIONS	SECTION
				T201807103	DESIGNED BY: MAH	BR		
				COUNTY		SHEET NO.		
				NEW CASTLE	CHECKED BY: JAT	6		

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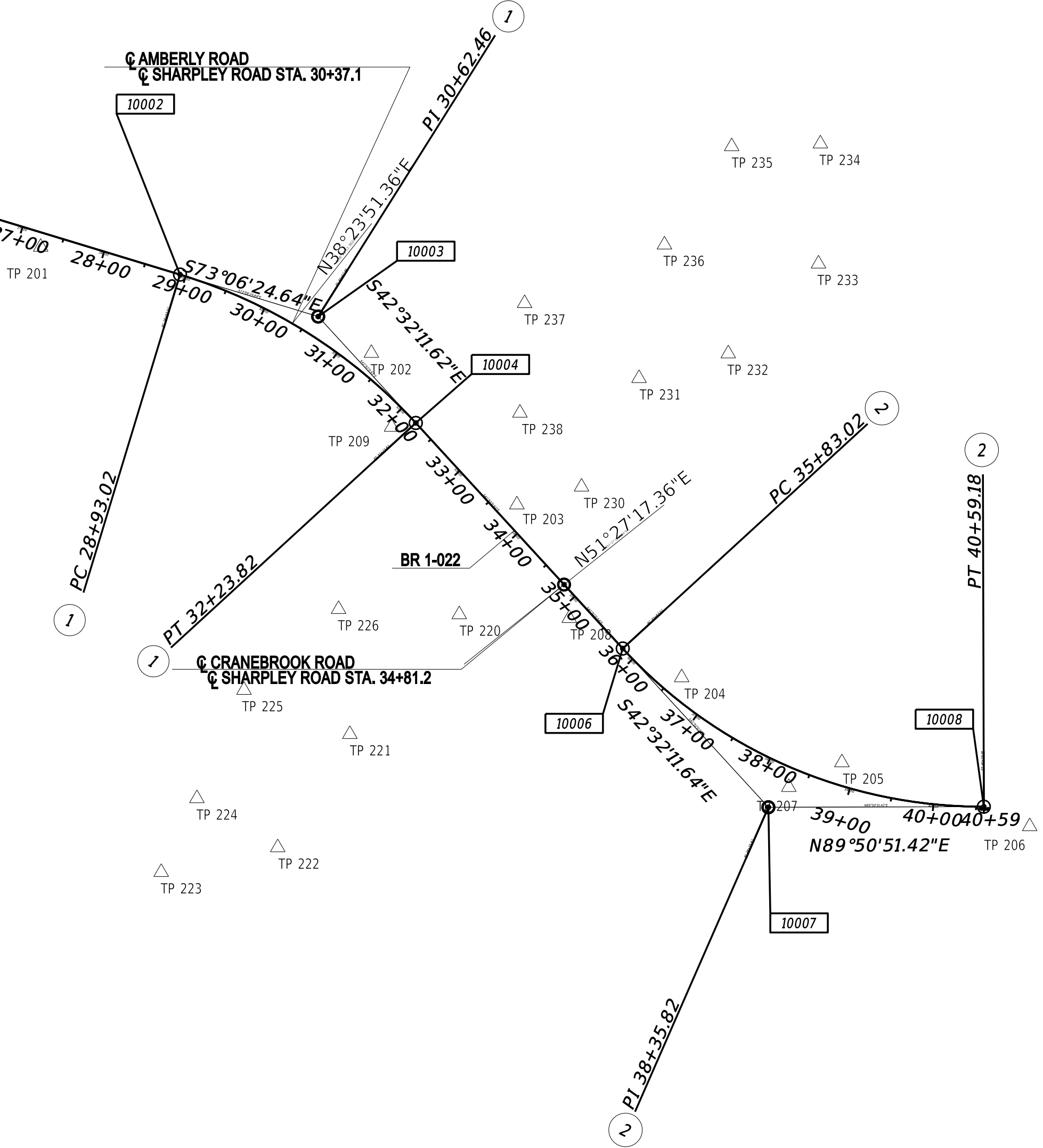
CONSTRUCTION ALIGNMENT CONTROL				
POINT NO.	STATION	OFFSET	NORTHING	EASTING
10000	0+00.00	0.00	654629.3084	614879.6431
10010	5+00.00	0.00	654484.0144	615358.0673
10011	10+00.00	0.00	654338.7205	615836.4914
10012	15+00.00	0.00	654193.4265	616314.9156
10013	20+00.00	0.00	654048.1326	616793.3397
10014	25+00.00	0.00	653902.8386	617271.7639
10008	40+59.18	0.00	653164.2661	618591.0522



HORIZONTAL / VERTICAL CONTROL DATA					
POINT NO.	STATION	OFFSET	NORTHING	EASTING	ELEV.
101	19+29.54	18.26	654051.1328	616720.6137	347.53
102	14+38.99	15.22	654196.5919	616252.1205	349.36
103	11+42.87	14.33	654283.4970	615969.0310	340.18
104	8+05.92	22.13	654373.9470	615644.3560	329.80
105	6+69.52	29.24	654406.7780	615511.7780	328.25
106	5+02.99	26.31	654457.9750	615353.2810	330.76
107	2+33.86	25.73	654536.7350	615095.9330	340.40
108	4+83.89	-27.71	654515.2110	615350.7090	332.49
109	6+27.53	-121.18	654562.9070	615515.3100	332.68
110	7+14.24	-48.08	654467.7600	615577.0330	328.08
111	9+56.80	-29.28	654379.2920	615803.6620	333.24
112	13+89.28	-26.06	654250.5410	616216.5460	349.15
113	6+32.65	117.25	654333.2790	615450.9230	323.89
114	7+34.28	248.49	654178.1680	615510.0290	320.88
115	7+45.60	375.33	654053.5160	615484.0040	319.75
116	5+57.26	207.66	654268.6820	615352.5110	327.03
117	7+08.57	-161.33	654577.7760	615604.5150	327.97
118	7+46.77	-290.43	654690.2040	615678.5870	329.74
119	7+50.20	-381.60	654776.4420	615708.3570	335.27
120	7+09.38	-277.46	654688.6610	615639.0440	333.75
201	27+27.17	16.58	653820.9626	617484.3170	338.60
202	31+31.45	-24.11	653696.4649	617872.3732	326.56
203	33+74.69	-22.56	653518.6320	618043.1210	322.56
204	36+58.12	-23.20	653315.7930	618236.4890	329.84
205	38+81.97	-26.27	653216.0320	618424.5110	341.84
206			653141.0520	618644.9290	346.37
207	38+33.17	22.29	653187.0820	618362.2320	339.66
208	35+14.47	22.26	653385.3320	618104.6020	324.30
209	32+07.53	24.03	653609.6960	617896.0570	324.23
220	34+23.94	114.42	653389.7300	617975.4830	320.52
221	34+40.66	304.00	653249.2460	617847.0970	319.84
222	34+81.39	456.18	653116.3510	617762.5000	318.80
223	34+10.32	576.55	653087.3410	617625.7610	314.02
224	33+74.85	487.12	653173.9420	617667.6760	314.63
225	33+18.51	360.50	653301.0530	617722.8810	316.90
226	33+23.59	214.55	653395.9790	617833.8610	317.11
230	34+10.56	-92.60	653539.5500	618118.9770	323.00
231	33+62.34	-228.42	653666.8970	618186.4610	321.71
232	34+11.80	-325.15	653695.8530	618291.1690	323.21
233	34+05.69	-474.43	653801.2740	618397.0380	327.81
234	33+03.37	-571.33	653942.1830	618399.2590	327.85
235	32+35.34	-492.48	653939.0070	618295.1730	328.24
236	32+67.02	-356.38	653823.6420	618216.3060	325.07
237	32+10.73	-189.13	653754.8790	618052.1820	324.49
238	32+97.77	-97.97	653626.2860	618046.6840	321.11

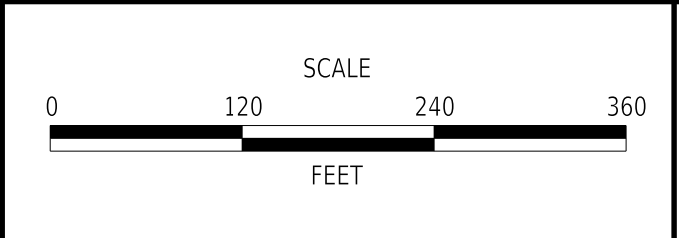
	STATION	NORTHING	EASTING
Circular Curve # 1			
PC (10002)	28+93.02	653788.6319	617647.8240
PI (10003)	30+62.46	653739.3947	617809.9524
CC (10100)		653195.3860	617467.6595
PT (10004)	32+23.82	653614.5435	617924.5041
Radius:	620.00		
Delta:	30°34'13" Right		
Degree of Curvature:	9°14'29"		
Length:	330.80		
Tangent:	169.44		
Chord:	326.89		
Middle Ordinate:	21.93		
External:	22.74		
Tangent Direction:	S 73°06'24.64" E		
Radial Direction:	S 16°53'35.36" W		
Chord Direction:	S 57°49'18.13" E		
Radial Direction:	S 47°27'48.38" W		
Tangent Direction:	S 42°32'11.62" E		

Circular Curve # 2			
PC (10006)	35+83.02	653349.8684	618167.3450
PI (10007)	38+35.82	653163.5938	618338.2531
CC (10200)		653737.2241	618589.5283
PT (10008)	40+59.18	653164.2661	618591.0522
Radius:	572.96		
Delta:	47°36'57" Left		
Degree of Curvature:	10°00'00"		
Length:	476.16		
Tangent:	252.80		
Chord:	462.58		
Middle Ordinate:	48.76		
External:	53.29		
Tangent Direction:	S 42°32'11.64" E		
Radial Direction:	S 47°27'48.36" W		
Chord Direction:	S 66°20'40.11" E		
Radial Direction:	S 0°09'08.58" E		
Tangent Direction:	N 89°50'51.42" E		



DATUM REFERENCE:
HORIZONTAL - THIS PROJECT IS REFERENCED TO THE DELAWARE STATE PLANE COORDINATE SYSTEM, NORTH AMERICAN DATUM OF 1983 (NAD 83).
VERTICAL - THIS PROJECT IS REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).

ADDENDA / REVISIONS	



BR 1-022 AND 1-525 ON SHARPLEY ROAD	CONTRACT		BRIDGE NO.	1-022 & 1-525	HORIZONTAL AND VERTICAL CONTROL	SECTION
	T201807103					BR
	COUNTY		DESIGNED BY: MAH			SHEET NO.
	NEW CASTLE		CHECKED BY: JAT			7

DRAINAGE INLET SCHEDULE						
NO.	STATION	OFFSET	BOX SIZE	GRATE	T.G. EL.	INV. EL.
DI-1	6+36.49	-17.53	48" X 30"	1	328.26	325.71
DI-2	6+36.49	17.07	48" X 30"	1	328.26	323.97

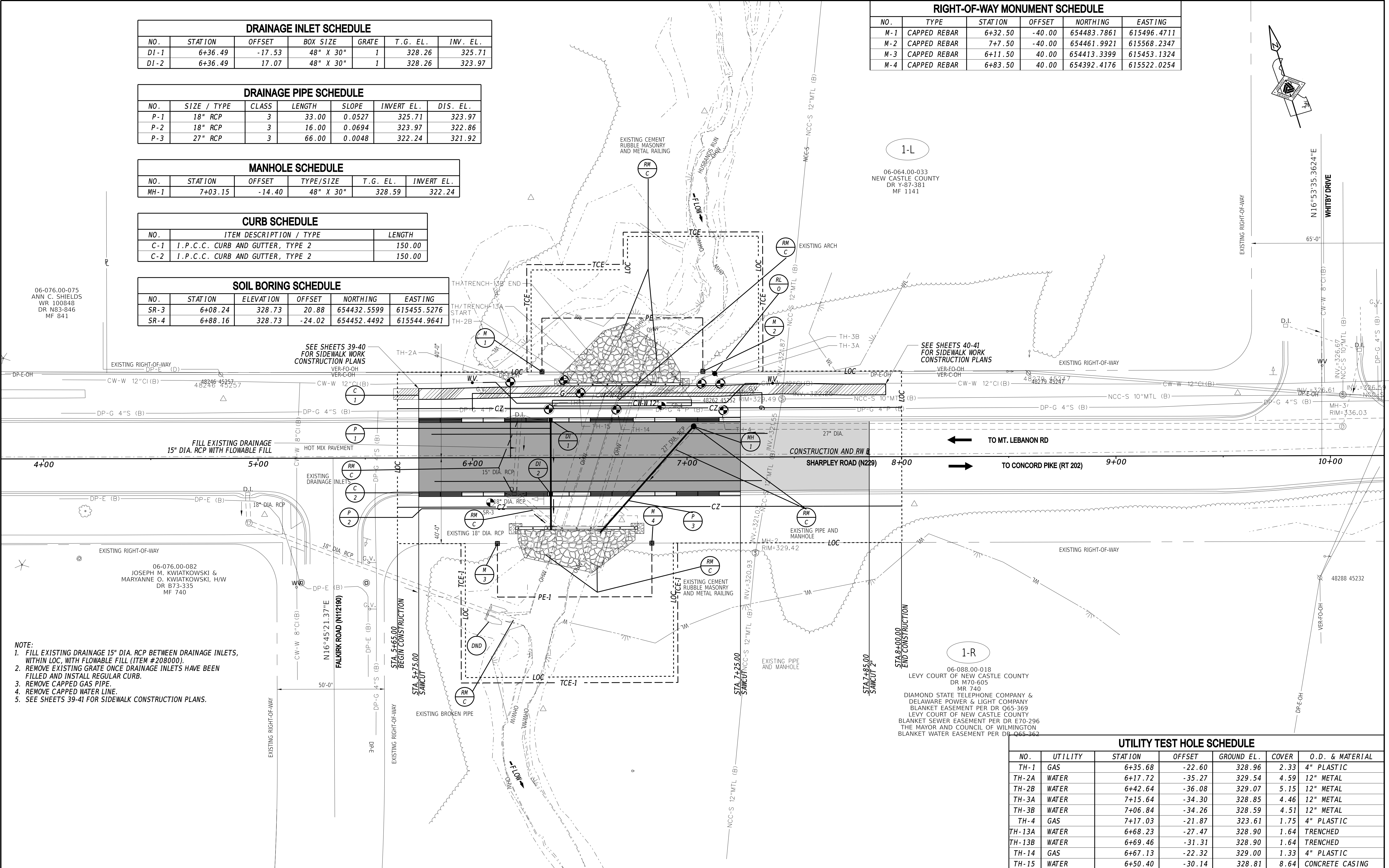
DRAINAGE PIPE SCHEDULE						
NO.	SIZE / TYPE	CLASS	LENGTH	SLOPE	INVERT EL.	DIS. EL.
P-1	18" RCP	3	33.00	0.0527	325.71	323.97
P-2	18" RCP	3	16.00	0.0694	323.97	322.86
P-3	27" RCP	3	66.00	0.0048	322.24	321.92

MANHOLE SCHEDULE					
NO.	STATION	OFFSET	TYPE/SIZE	T.G. EL.	INVERT EL.
MH-1	7+03.15	-14.40	48" X 30"	328.59	322.24

CURB SCHEDULE		
NO.	ITEM DESCRIPTION / TYPE	LENGTH
C-1	I.P.C.C. CURB AND GUTTER, TYPE 2	150.00
C-2	I.P.C.C. CURB AND GUTTER, TYPE 2	150.00

SOIL BORING SCHEDULE					
NO.	STATION	ELEVATION	OFFSET	NORTHING	EASTING
SR-3	6+08.24	328.73	20.88	654432.5599	615455.5276
SR-4	6+88.16	328.73	-24.02	654452.4492	615544.9641

RIGHT-OF-WAY MONUMENT SCHEDULE					
NO.	TYPE	STATION	OFFSET	NORTHING	EASTING
M-1	CAPPED REBAR	6+32.50	-40.00	654483.7861	615496.4711
M-2	CAPPED REBAR	7+7.50	-40.00	654461.9921	615568.2347
M-3	CAPPED REBAR	6+11.50	40.00	654413.3399	615453.1324
M-4	CAPPED REBAR	6+83.50	40.00	654392.4176	615522.0254

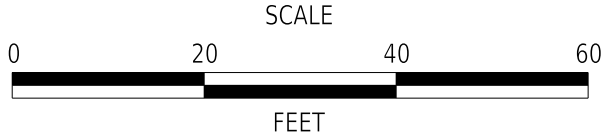


- NOTE:
1. FILL EXISTING DRAINAGE 15" DIA. RCP BETWEEN DRAINAGE INLETS, WITHIN LOC, WITH FLOWABLE FILL (ITEM #208000).
 2. REMOVE EXISTING GRATE ONCE DRAINAGE INLETS HAVE BEEN FILLED AND INSTALL REGULAR CURB.
 3. REMOVE CAPPED GAS PIPE.
 4. REMOVE CAPPED WATER LINE.
 5. SEE SHEETS 39-41 FOR SIDEWALK CONSTRUCTION PLANS.

UTILITY TEST HOLE SCHEDULE

NO.	UTILITY	STATION	OFFSET	GROUND EL.	COVER	O.D. & MATERIAL
TH-1	GAS	6+35.68	-22.60	328.96	2.33	4" PLASTIC
TH-2A	WATER	6+17.72	-35.27	329.54	4.59	12" METAL
TH-2B	WATER	6+42.64	-36.08	329.07	5.15	12" METAL
TH-3A	WATER	7+15.64	-34.30	328.85	4.46	12" METAL
TH-3B	WATER	7+06.84	-34.26	328.59	4.51	12" METAL
TH-4	GAS	7+17.03	-21.87	323.61	1.75	4" PLASTIC
TH-13A	WATER	6+68.23	-27.47	328.90	1.64	TRENCHED
TH-13B	WATER	6+69.46	-31.31	328.90	1.64	TRENCHED
TH-14	GAS	6+67.13	-22.32	329.00	1.33	4" PLASTIC
TH-15	WATER	6+50.40	-30.14	328.81	8.64	CONCRETE CASING

ADDENDA / REVISIONS

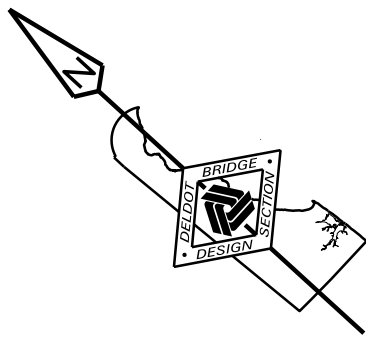


BR 1-022 AND 1-525 ON
SHARPLEY ROAD

CONTRACT	BRIDGE NO.	1-525
T201807103	DESIGNED BY:	MAH
COUNTY	CHECKED BY:	JAT
NEW CASTLE		

CONSTRUCTION PLAN

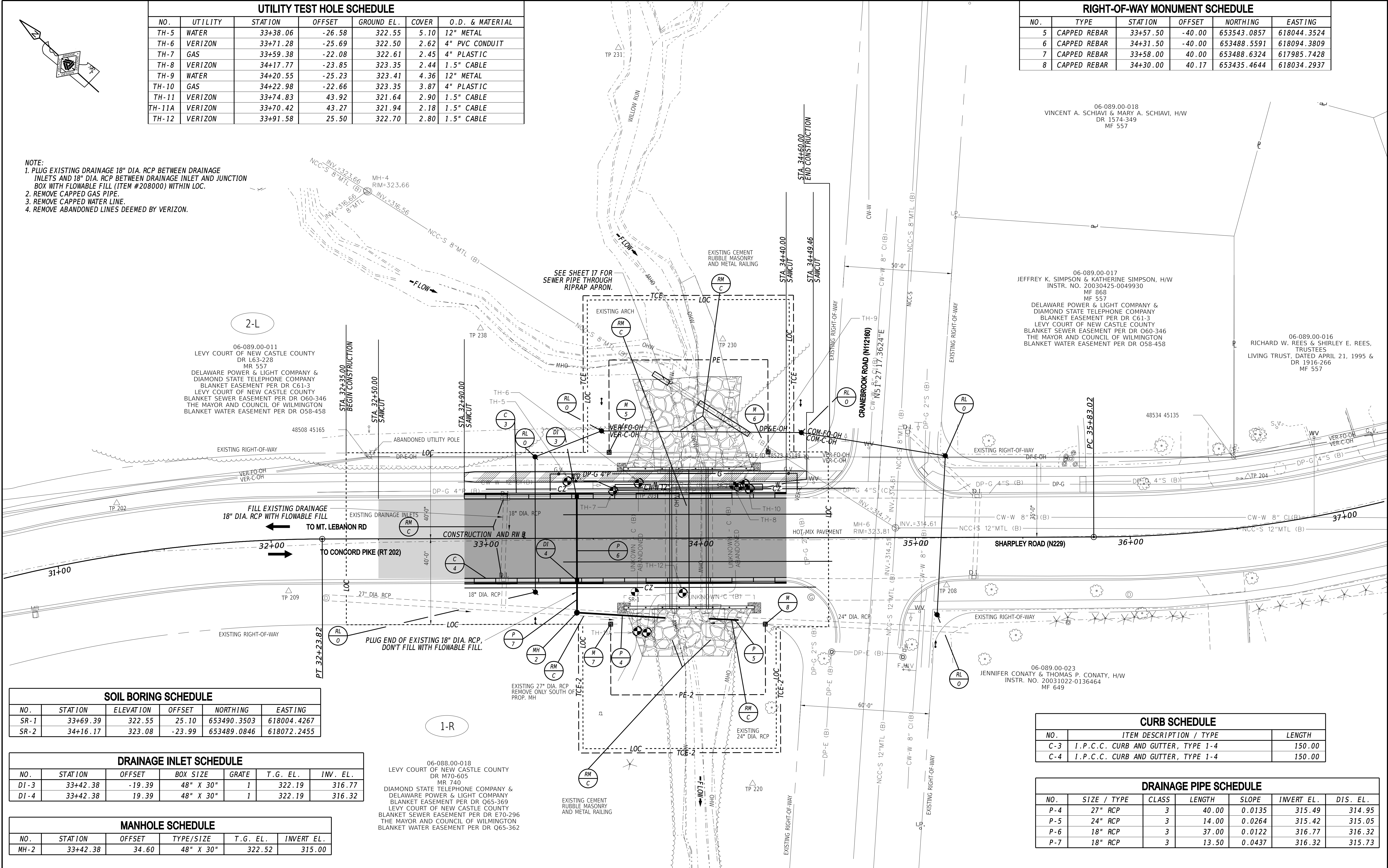
SECTION
BR
SHEET NO.
8



UTILITY TEST HOLE SCHEDULE						
NO.	UTILITY	STATION	OFFSET	GROUND EL.	COVER	O.D. & MATERIAL
TH-5	WATER	33+38.06	-26.58	322.55	5.10	12" METAL
TH-6	VERIZON	33+71.28	-25.69	322.50	2.62	4" PVC CONDUIT
TH-7	GAS	33+59.38	-22.08	322.61	2.45	4" PLASTIC
TH-8	VERIZON	34+17.77	-23.85	323.35	2.44	1.5" CABLE
TH-9	WATER	34+20.55	-25.23	323.41	4.36	12" METAL
TH-10	GAS	34+22.98	-22.66	323.35	3.87	4" PLASTIC
TH-11	VERIZON	33+74.83	43.92	321.64	2.90	1.5" CABLE
TH-11A	VERIZON	33+70.42	43.27	321.94	2.18	1.5" CABLE
TH-12	VERIZON	33+91.58	25.50	322.70	2.80	1.5" CABLE

NOTE:
1. PLUG EXISTING DRAINAGE 18" DIA. RCP BETWEEN DRAINAGE INLETS AND 18" DIA. RCP BETWEEN DRAINAGE INLET AND JUNCTION BOX WITH FLOWABLE FILL (ITEM #208000) WITHIN LOC.
2. REMOVE CAPPED GAS PIPE.
3. REMOVE CAPPED WATER LINE.
4. REMOVE ABANDONED LINES DEEMED BY VERIZON.

RIGHT-OF-WAY MONUMENT SCHEDULE					
NO.	TYPE	STATION	OFFSET	NORTHING	EASTING
5	CAPPED REBAR	33+57.50	-40.00	653543.0857	618044.3524
6	CAPPED REBAR	34+31.50	-40.00	653488.5591	618094.3809
7	CAPPED REBAR	33+58.00	40.00	653488.6324	617985.7428
8	CAPPED REBAR	34+30.00	40.17	653435.4644	618034.2937



SOIL BORING SCHEDULE					
NO.	STATION	ELEVATION	OFFSET	NORTHING	EASTING
SR-1	33+69.39	322.55	25.10	653490.3503	618004.4267
SR-2	34+16.17	323.08	-23.99	653489.0846	618072.2455

DRAINAGE INLET SCHEDULE						
NO.	STATION	OFFSET	BOX SIZE	GRATE	T.G. EL.	INV. EL.
DI-3	33+42.38	-19.39	48" X 30"	1	322.19	316.77
DI-4	33+42.38	19.39	48" X 30"	1	322.19	316.32

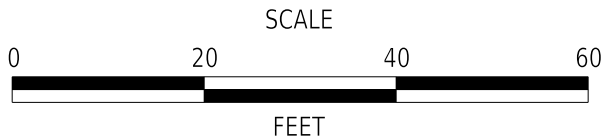
MANHOLE SCHEDULE					
NO.	STATION	OFFSET	TYPE/SIZE	T.G. EL.	INVERT EL.
MH-2	33+42.38	34.60	48" X 30"	322.52	315.00

06-088.00-018
LEVY COURT OF NEW CASTLE COUNTY
DR M70-605
MR 740
DIAMOND STATE TELEPHONE COMPANY &
DELAWARE POWER & LIGHT COMPANY
BLANKET EASEMENT PER DR Q65-369
LEVY COURT OF NEW CASTLE COUNTY
BLANKET SEWER EASEMENT PER DR E70-296
THE MAYOR AND COUNCIL OF WILMINGTON
BLANKET WATER EASEMENT PER DR Q65-362

CURB SCHEDULE		
NO.	ITEM DESCRIPTION / TYPE	LENGTH
C-3	I.P.C.C. CURB AND GUTTER, TYPE 1-4	150.00
C-4	I.P.C.C. CURB AND GUTTER, TYPE 1-4	150.00

DRAINAGE PIPE SCHEDULE						
NO.	SIZE / TYPE	CLASS	LENGTH	SLOPE	INVERT EL.	DIS. EL.
P-4	27" RCP	3	40.00	0.0135	315.49	314.95
P-5	24" RCP	3	14.00	0.0264	315.42	315.05
P-6	18" RCP	3	37.00	0.0122	316.77	316.32
P-7	18" RCP	3	13.50	0.0437	316.32	315.73

ADDENDA / REVISIONS

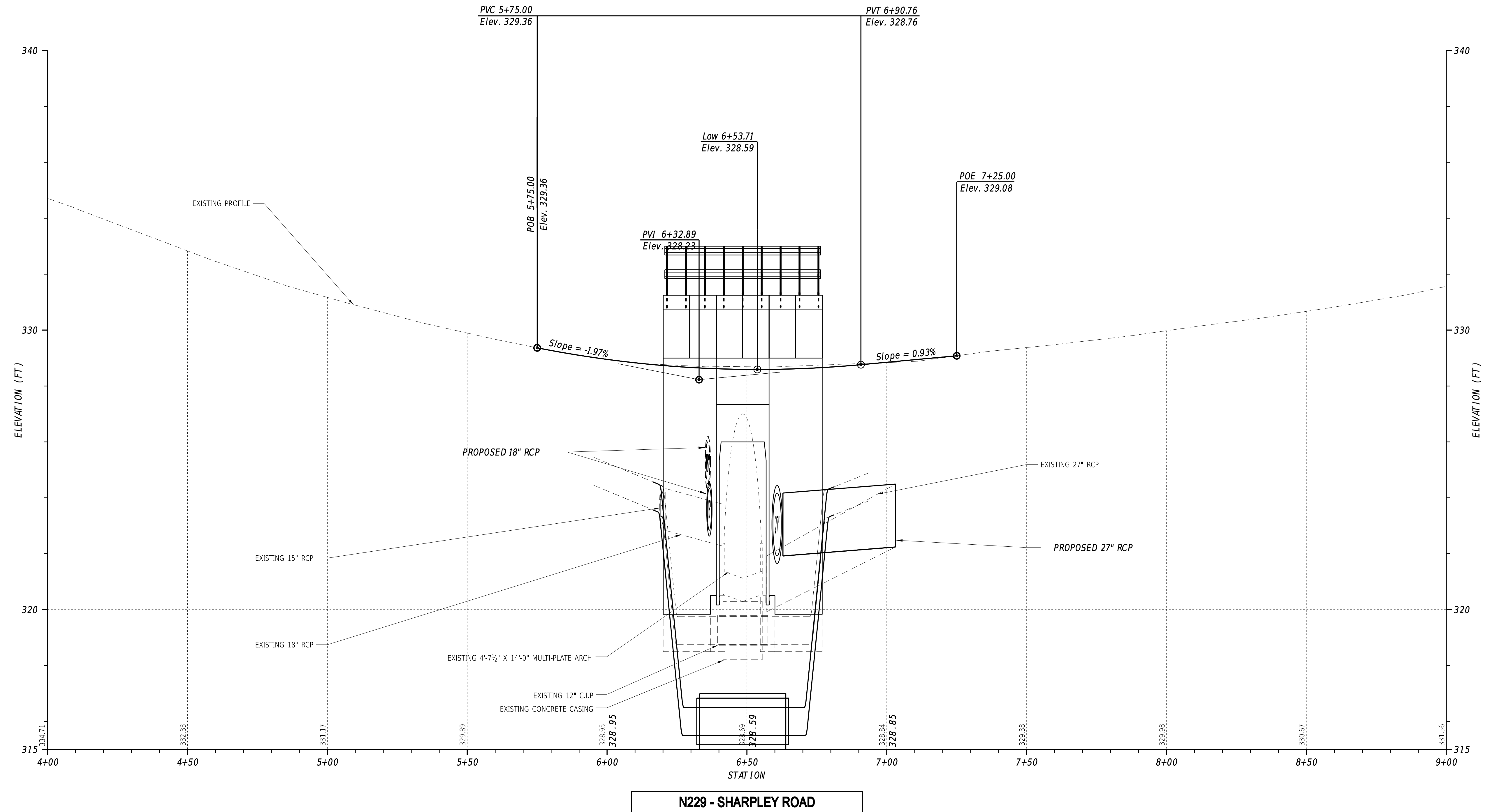


BR 1-022 AND 1-525 ON
SHARPLEY ROAD


CONTRACT T201807103 COUNTY NEW CASTLE	BRIDGE NO.	1-022	CONSTRUCTION PLAN	SECTION BR
	DESIGNED BY:	MAH		SHEET NO.
	CHECKED BY:	JAT		9

NOTE:
THIS PROFILE SHOWS THE ELEVATION OF THE STRUCTURE AT THE DOWNSTREAM END,
BUT THE PROFILE OF THE ROAD IS TAKEN AT THE STRUCTURE CENTERLINE.

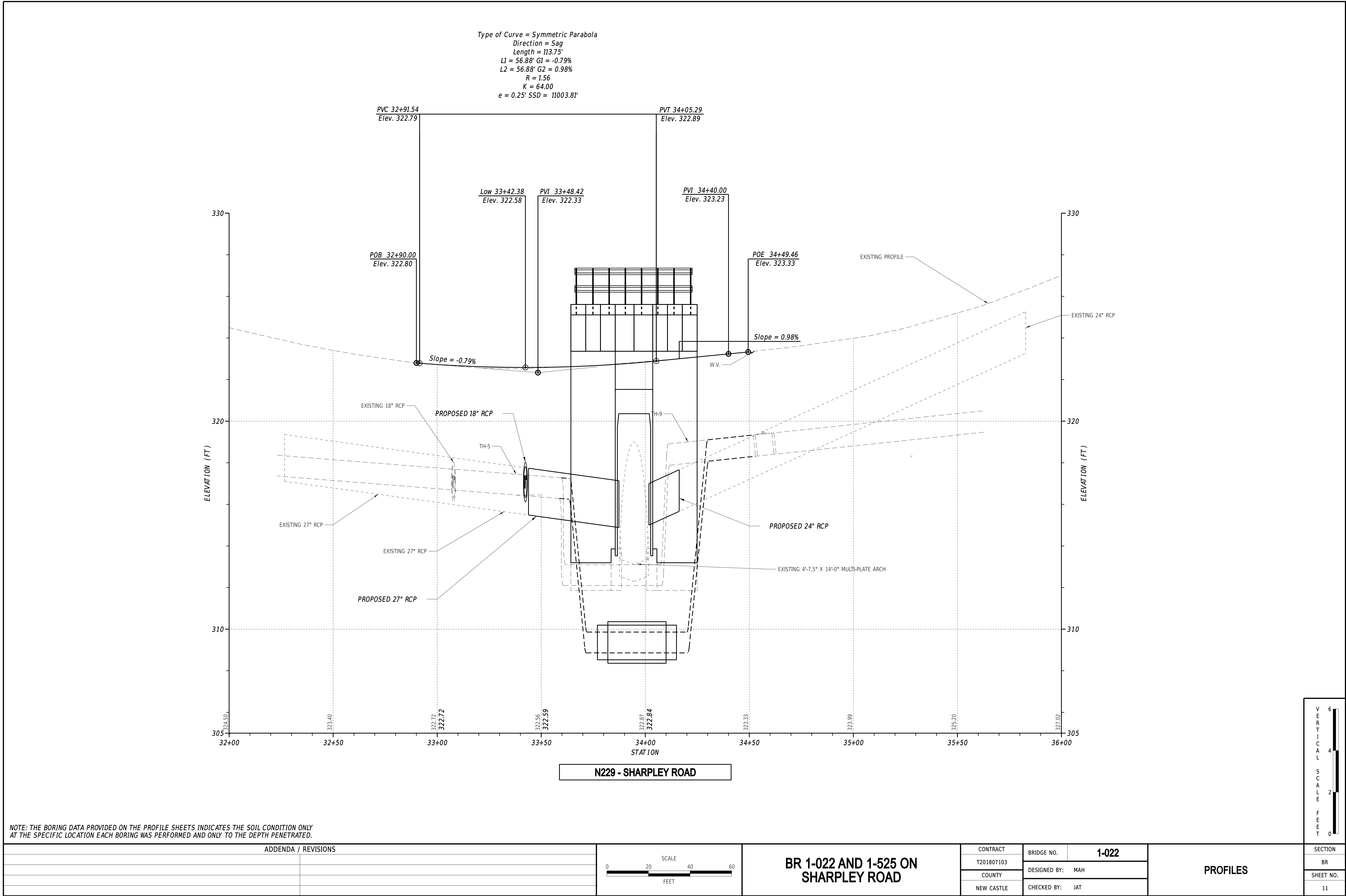
Type of Curve = Symmetric Parabola
 Direction = Sag
 Length = 115.73'
 L1 = 57.86' G1 = -1.97%
 L2 = 57.86' G2 = 0.93%
 R = 2.50
 K = 40.00
 e = 0.42' SSD = 321.38'

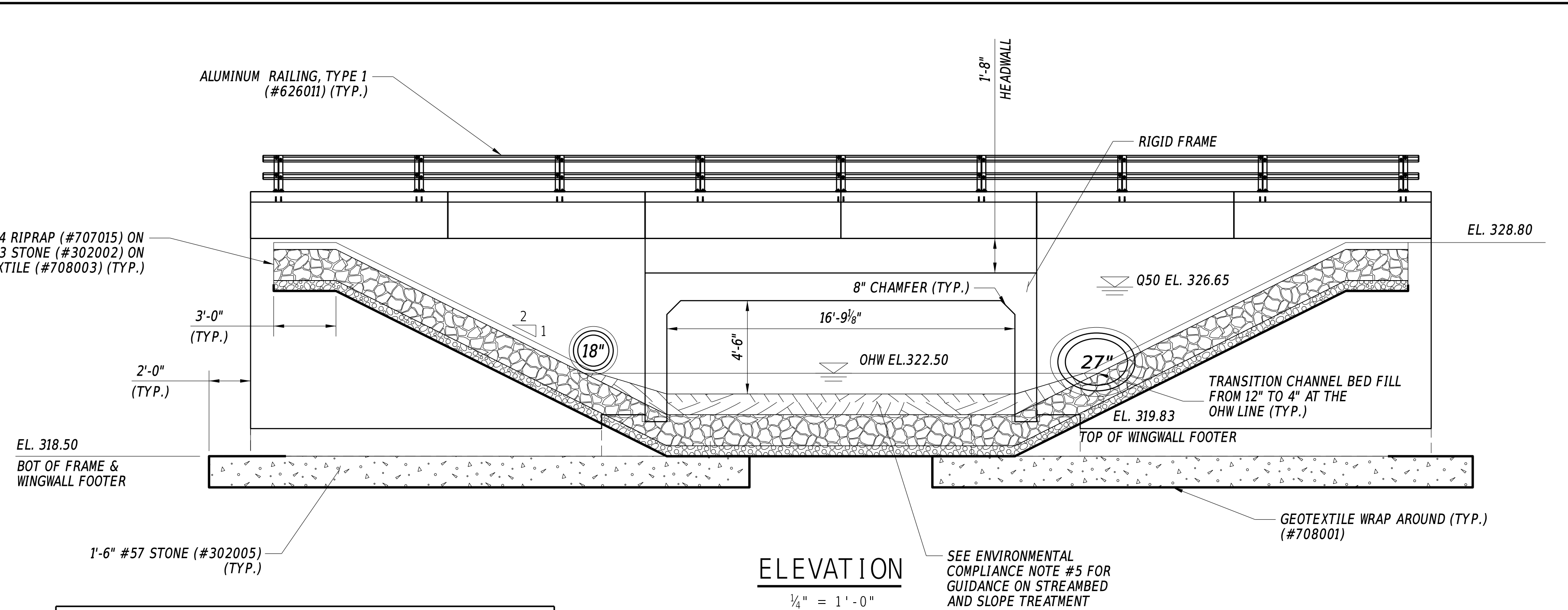
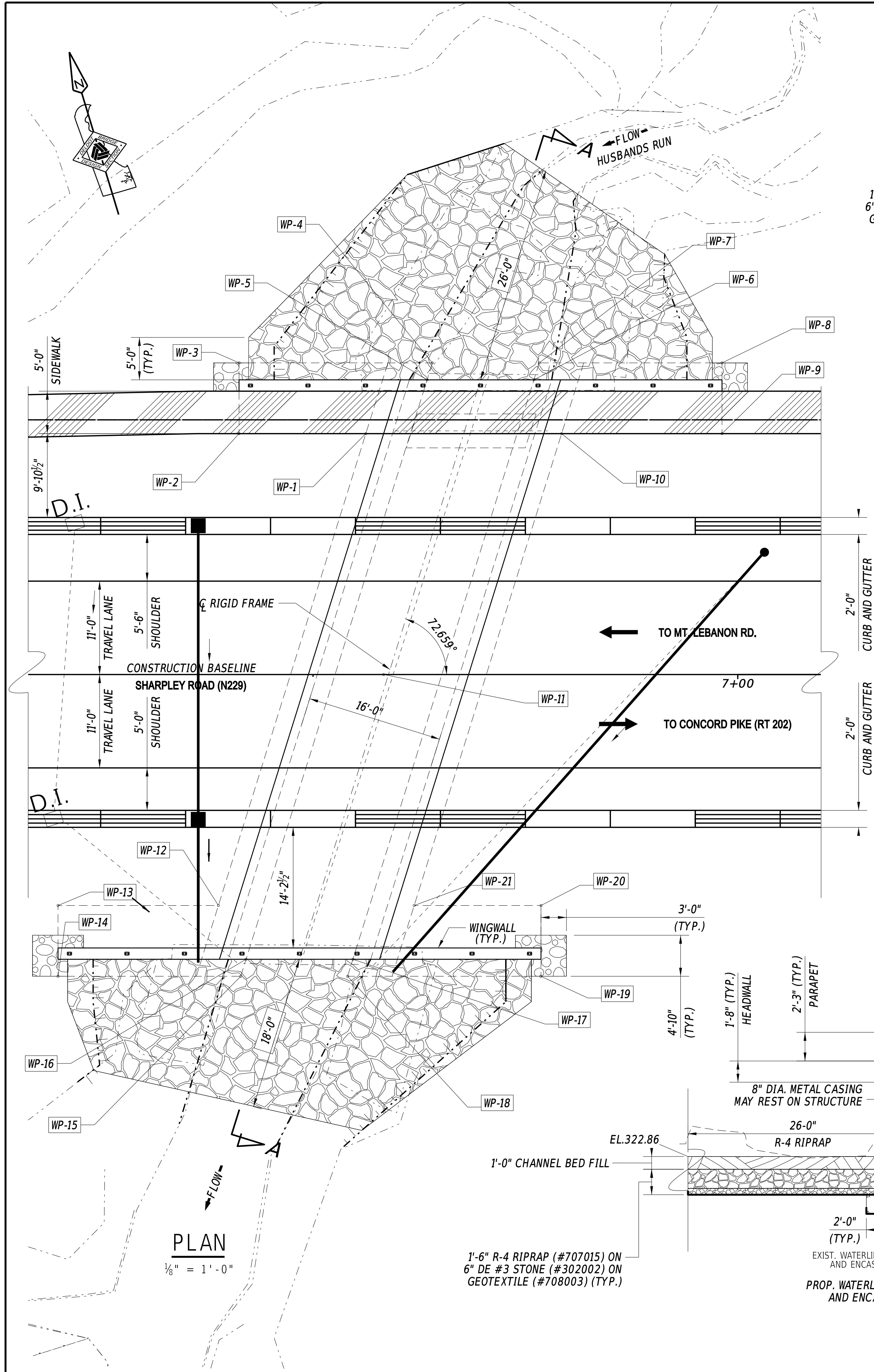


NOTE: THE BORING DATA PROVIDED ON THE PROFILE SHEETS INDICATES THE SOIL CONDITION ONLY AT THE SPECIFIC LOCATION EACH BORING WAS PERFORMED AND ONLY TO THE DEPTH PENETRATED.

ADDENDA / REVISIONS			BR 1-022 AND 1-525 ON SHARPLEY ROAD	CONTRACT	BRIDGE NO.	1-525	PROFILES	SECTION
				T201807103	DESIGNED BY: MAH			BR
				COUNTY	CHECKED BY: JAT			SHEET NO.
				NEW CASTLE				10

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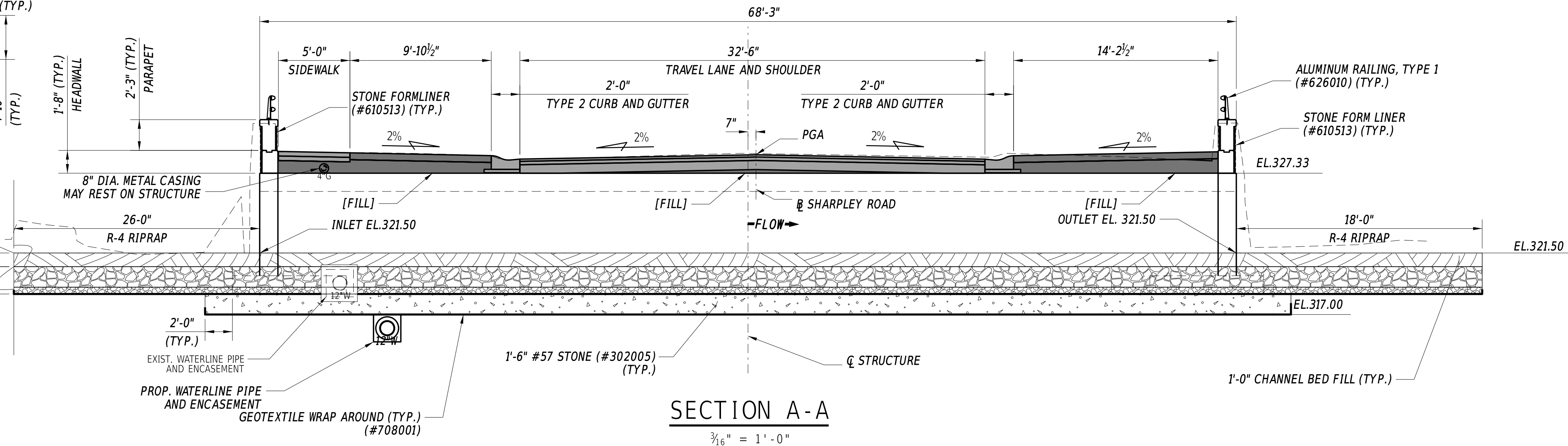




WORKING POINTS				
POINT NO.	STATION	OFFSET	NORTHING	EASTING
WP - 1	6+56.22	-28.38	654465.7710	615515.7880
WP - 2	6+41.29	-28.38	654470.1086	615501.5050
WP - 3	6+41.29	-36.71	654478.0823	615503.9265
WP - 4	6+64.06	-36.71	654471.4664	615525.7114
WP - 5	6+63.43	-34.71	654469.7342	615524.5327
WP - 6	6+76.00	-34.71	654466.0811	615536.5616
WP - 7	6+76.63	-36.71	654467.8133	615537.7403
WP - 8	6+98.15	-36.71	654461.5603	615558.3301
WP - 9	6+98.15	-28.38	654453.5866	615555.9086
WP - 10	6+79.26	-28.38	654459.0736	615510.0911
WP - 11	6+58.88	0.00	654437.8459	615509.5441
WP - 12	6+38.86	27.21	654417.6293	615483.0291
WP - 13	6+19.98	27.21	654423.1163	615464.9616
WP - 14	6+19.98	35.54	654415.1426	615462.5400
WP - 15	6+41.50	35.54	654408.8896	615483.1298
WP - 16	6+42.12	33.54	654410.6215	615484.3083
WP - 17	6+54.69	33.54	654406.9682	615496.3371
WP - 18	6+54.07	35.54	654405.2365	615495.1587
WP - 19	6+76.83	35.54	654398.6262	615516.9251
WP - 20	6+76.83	27.21	654406.5943	615519.3652
WP - 21	6+61.91	27.21	654410.9320	615505.0821

NOTE
FORMLINER NOT SHOWN FOR CLARITY. SEE PRECAST AND CIP
CONCRETE DETAILS FOR FORMLINER DETAILS.

SECTION A-A Note:
FILL GAPS BETWEEN STRUCTURE AND ROAD OR STRUCTURE AND TOPSOIL WHERE NOTED.
[FILL]: STRUCTURAL BACKFILL (BORROW, TYPE C) ITEM #207021



ADDENDA / REVISIONS	

SCALE AS NOTED

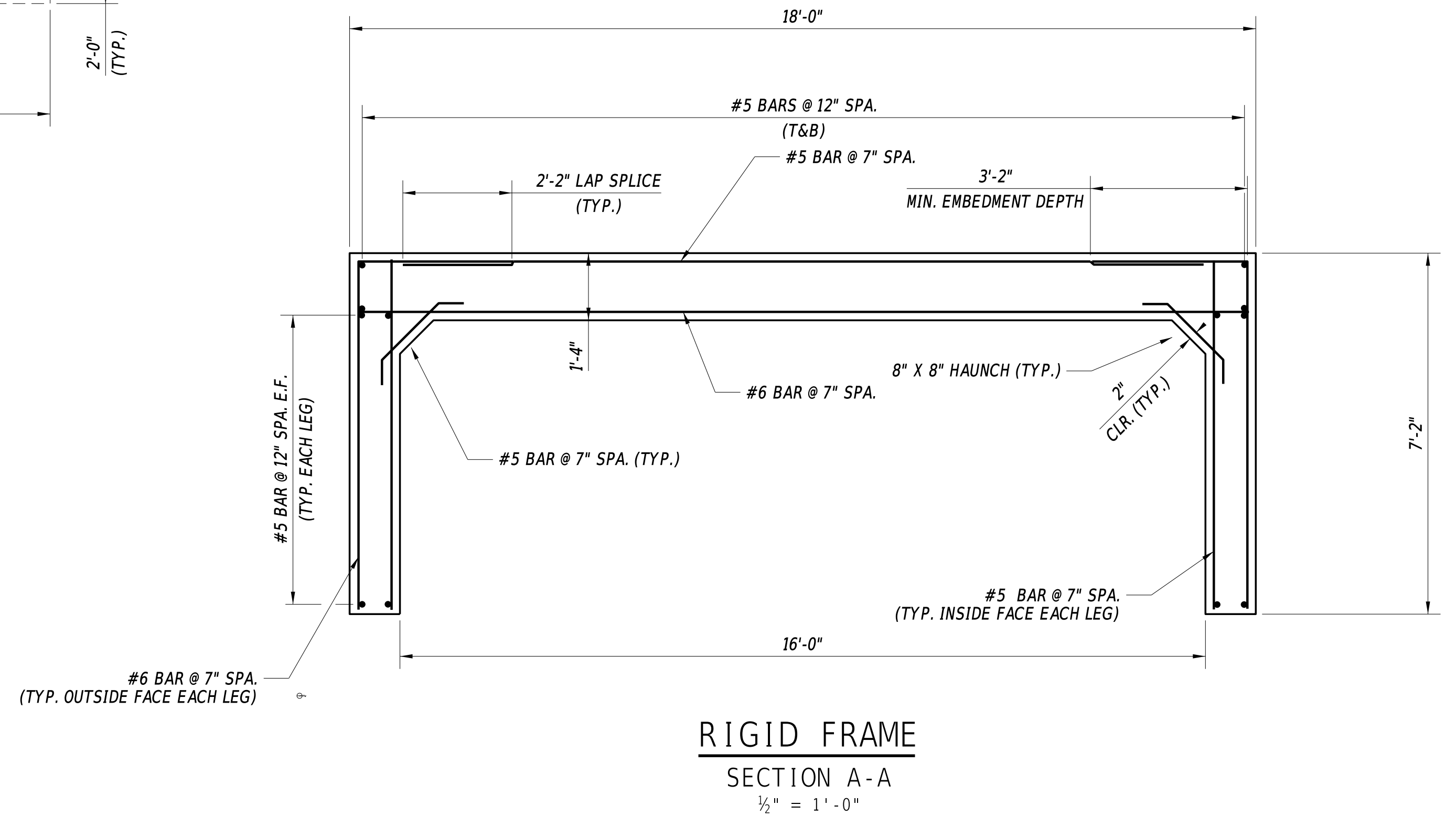
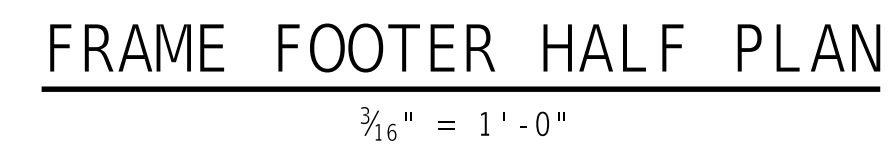
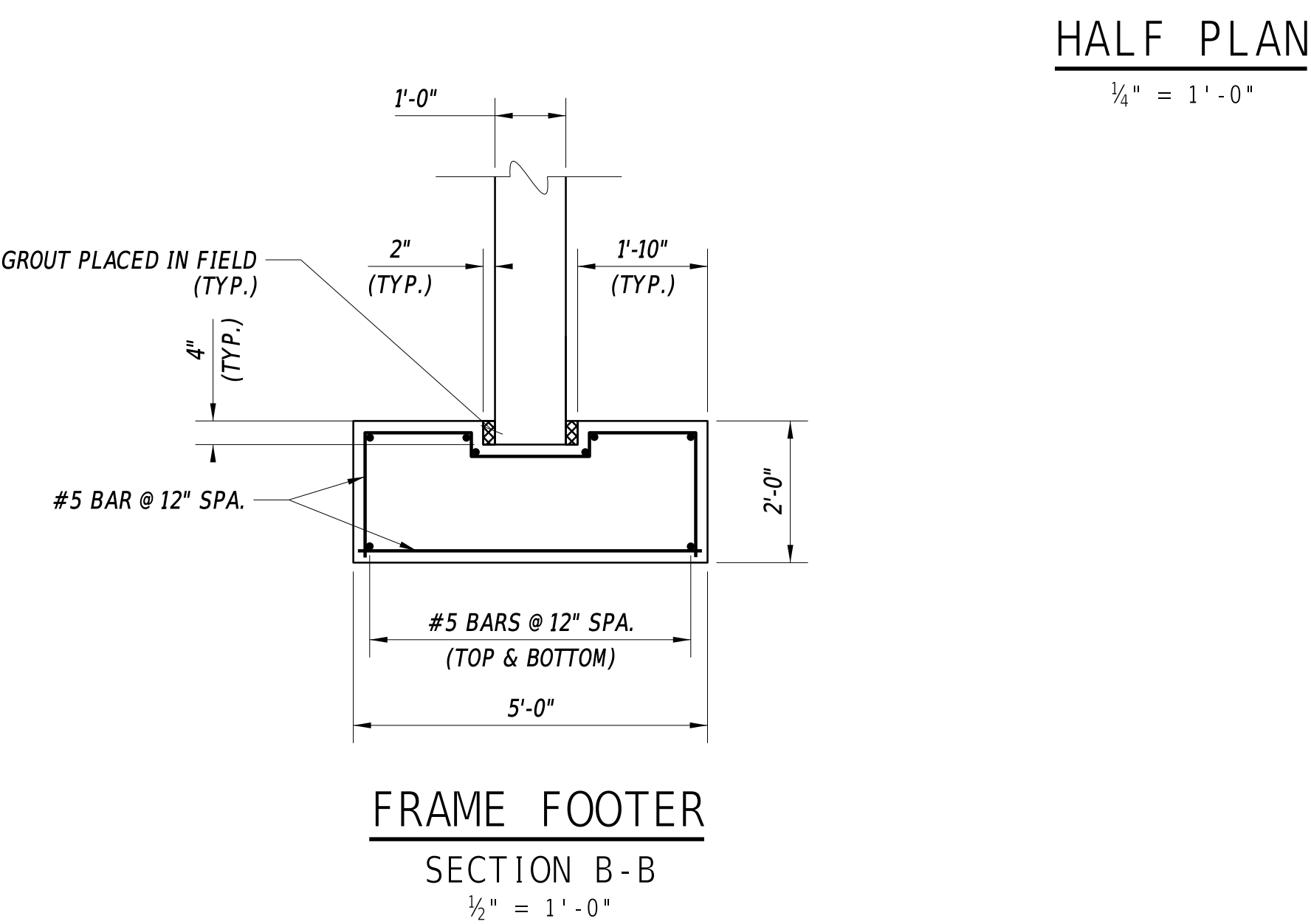
BR 1-022 AND 1-525 ON SHARPLEY ROAD
--

CONTRACT T201807103	BRIDGE NO. 1-525
COUNTY NEW CASTLE	DESIGNED BY: MAH CHECKED BY: JAT

BRIDGE PLAN, SECTION, AND ELEVATION
--

SECTION BR
SHEET NO. 12

.F. = EACH FACE
.F. = FILL FACE
.F. = STREAM FACE
&B = TOP AND BOTTOM



ADDENDA / REVISIONS		SCALE AS NOTED	BR 1-022 AND 1-525 ON SHARPLEY ROAD	CONTRACT	BRIDGE NO.	1-525	PRECAST AND CIP CONCRETE DETAILS	SECTION
				T201807103	DESIGNED BY: MAH	BR		
				COUNTY				SHEET NO.
				NEW CASTLE	CHECKED BY: JAT	13		

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E.F. = EACH FACE
F.F. = FILL FACE
S.F. = STREAM FACE
T&B = TOP AND BOTTOM
O.D. = OUTER DIAMETER


$$\frac{1}{4}'' = 1' - 0''$$

- NOTE:
1. PROPOSED DRAINAGE PIPES PROTRUDE THROUGH THE DOWNSTREAM WINGWALLS ONLY.
 2. WINGWALLS ON UPSTREAM SIDE ARE SIMILAR TO DOWNSTREAM WINGWALLS EXCEPT FOR THE DRAINAGE PIPES.
 3. WALL FORM LINER PATTERN SHALL BE COLONIAL FIELD STONE OR SIMILAR. REFER TO SPECIAL PROVISION #610513 - FORM LINERS FOR FURTHER REQUIREMENTS.



(X)

$$\frac{1}{2}'' = 1' - 0''$$


(X)

$$\frac{1}{2}'' = 1' - 0''$$

$$\frac{1}{2}'' = 1' - 0''$$


SECTION C-C

$$1'' = 1' - 0''$$

ADDENDA / REVISIONS		SCALE AS NOTED	BR 1-022 AND 1-525 ON SHARPLEY ROAD	CONTRACT	BRIDGE NO.	1-525	SECTION
				T201807103	DESIGNED BY: MAH	BR	
				COUNTY			
				NEW CASTLE	CHECKED BY: JAT	14	

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LEGEND

E.F. = EACH FACE

F.F. = FILL FACE

S.F. = STREAM FACE

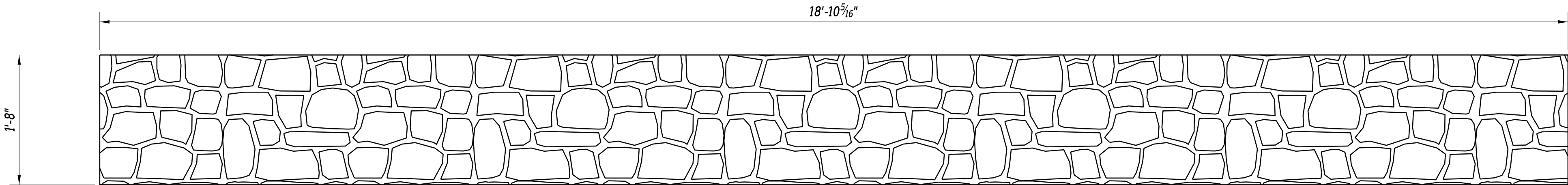
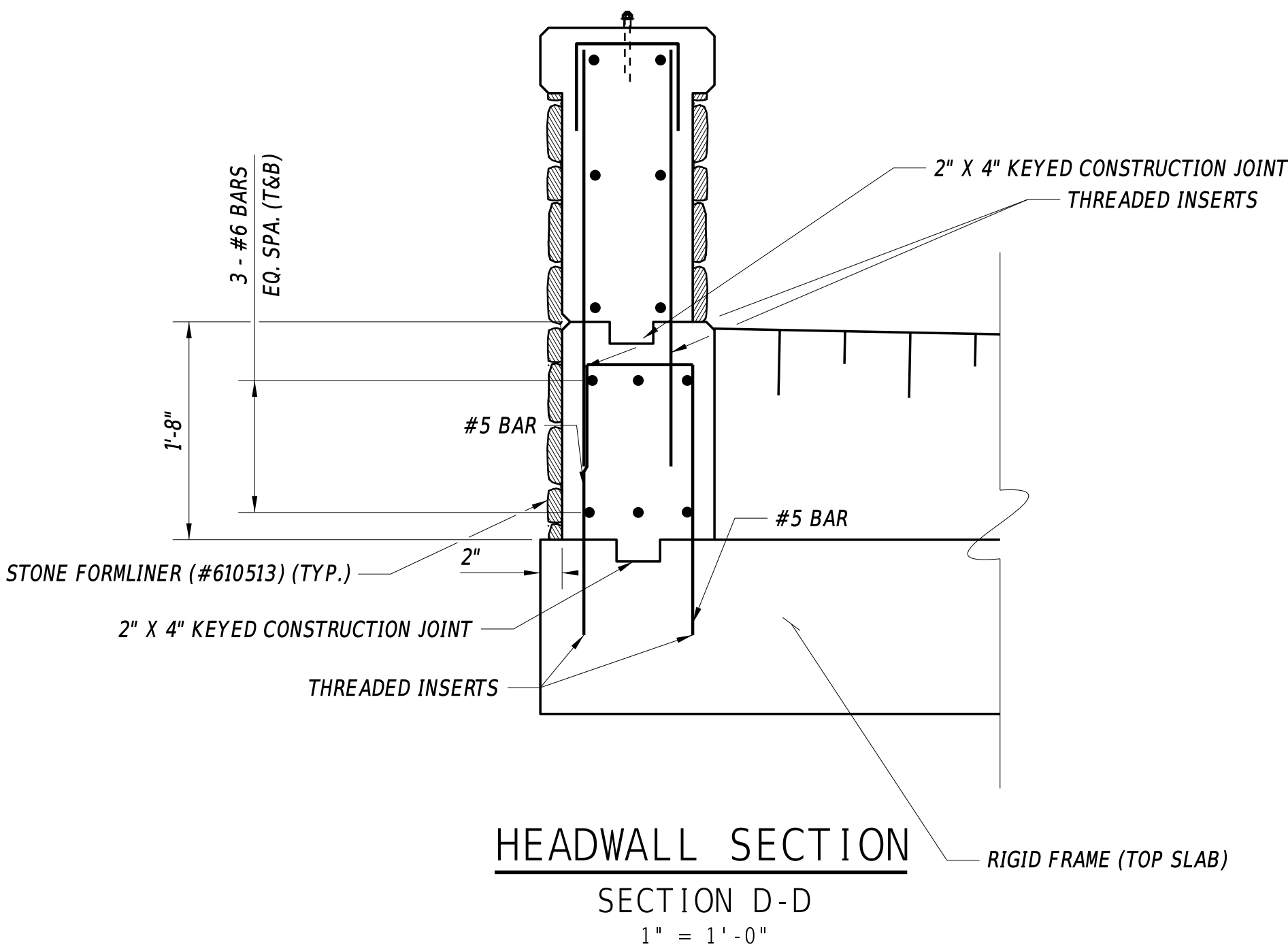
T&B = TOP AND BOTTOM

- NOTES:
1.

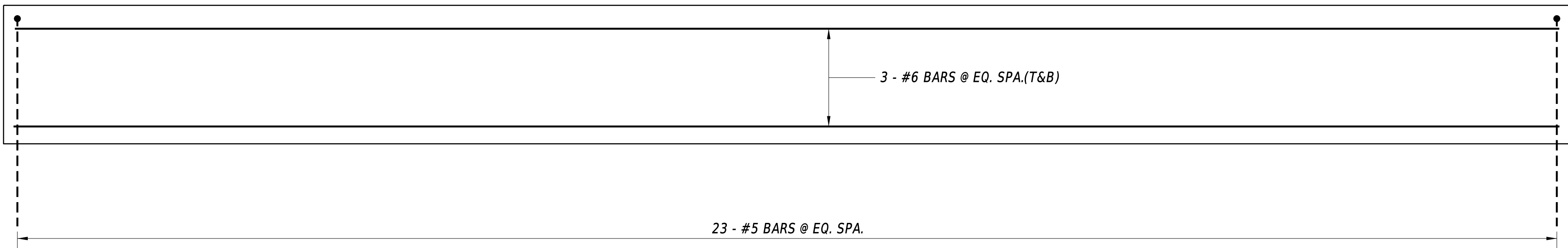
ALL DIMENSIONS SHOWN ARE TO THE EXTERIOR DESIGN FACE OF THE HEADWALL TO ACCOUNT FOR 2" OF CLEAR COVER FOR EPOXY COATED REBAR. THESE DIMENSIONS DO NOT TAKE INTO ACCOUNT THE EXTRA THICKNESS NEEDED TO ACHIEVE THE FORMLINED FINISH AS SHOWN ON THE PLANS.
2.

WALL FORM LINER PATTERN SHALL BE COLONIAL FIELD STONE OR SIMILAR. REFER TO SPECIAL PROVISION #610513 - FORM LINERS FOR FURTHER REQUIREMENTS.
3.

HEADWALL IS SHOWN AS PRE-CAST. CONTRACTOR MAY CHOOSE TO CAST-IN-PLACE THE HEADWALL AT NO ADDITIONAL COST. PAYMENT WILL BE MADE AS INCIDENTAL TO ITEM #612001 - PRECAST RIGID FRAME.



HEADWALL STREAM FACE ELEVATION
1" = 1' - 0"

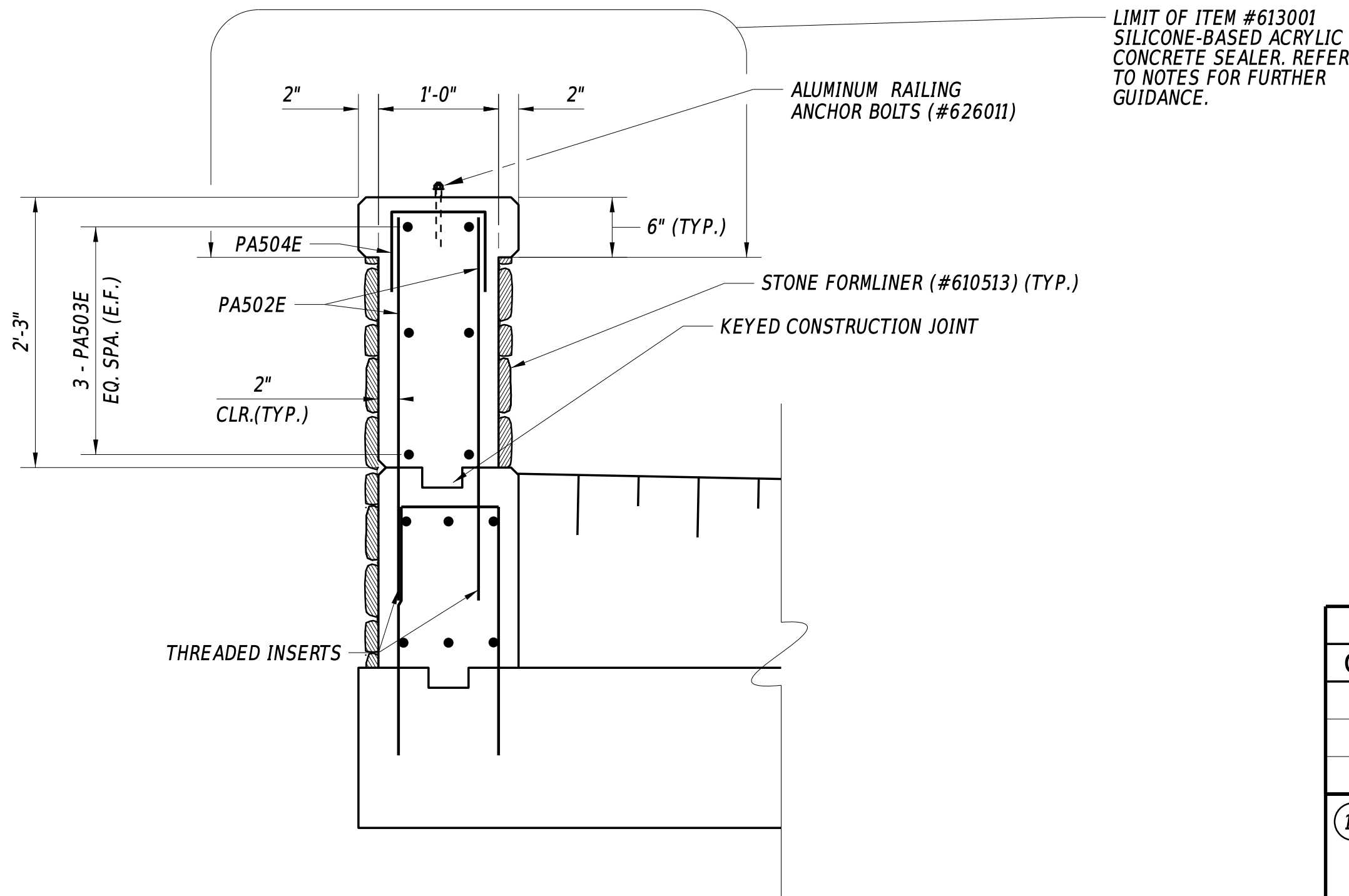


HEADWALL REINFORCEMENT
1" = 1' - 0"

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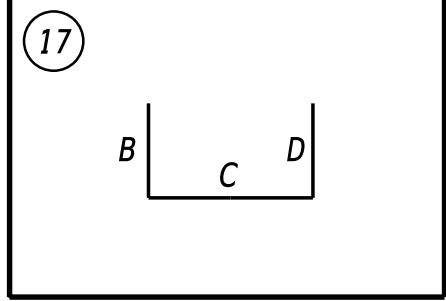
ADDENDA / REVISIONS		SCALE AS NOTED	BR 1-022 AND 1-525 ON SHARPLEY ROAD	CONTRACT	BRIDGE NO.	1-525	PRECAST AND CIP CONCRETE DETAILS	SECTION
				T201807103	DESIGNED BY: MAH			BR
				COUNTY	CHECKED BY: JAT			SHEET NO.
				NEW CASTLE				15

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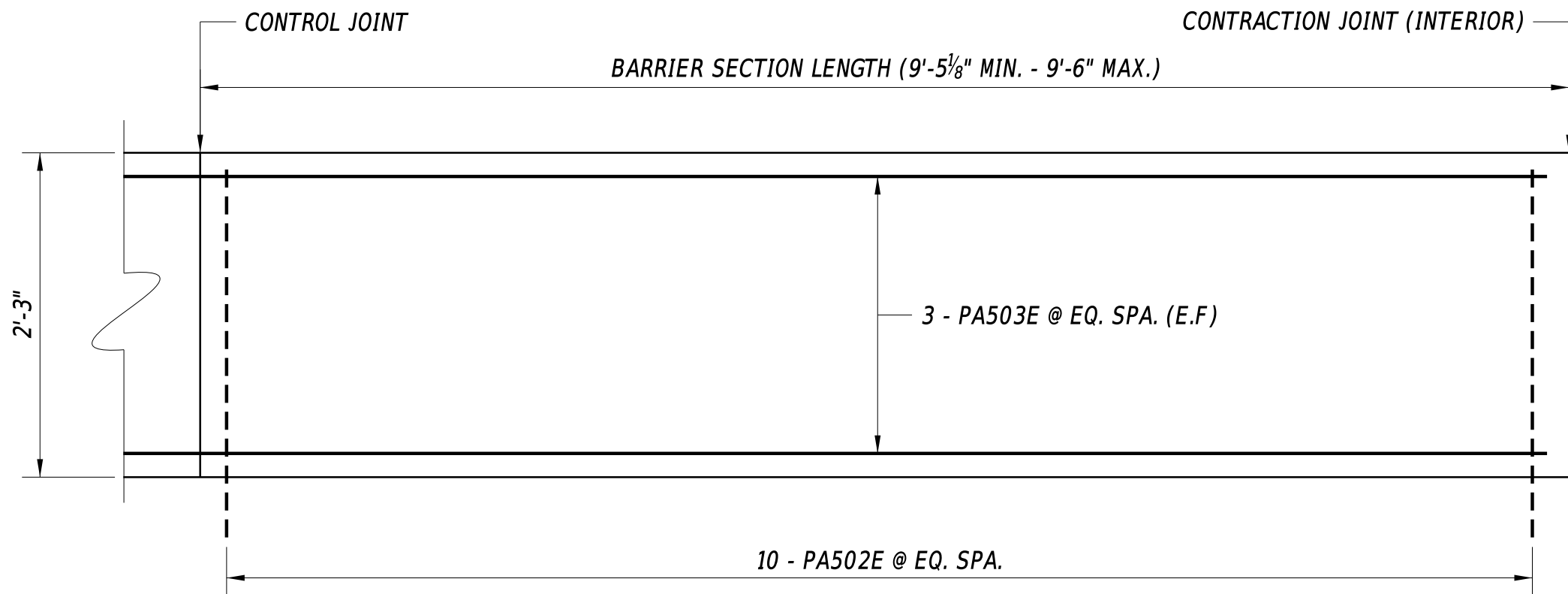


PARAPET SECTION
SECTION D-D
1" = 1'-0"

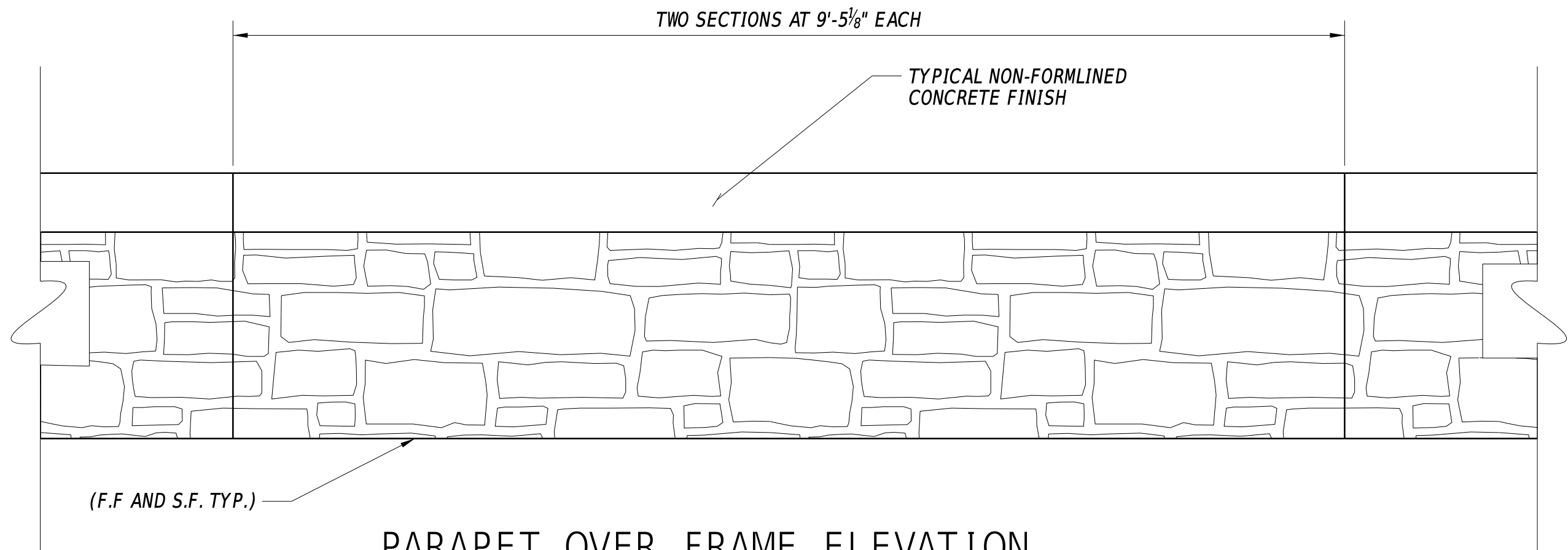
CONCRETE PARAPET REINFORCING BAR LIST							
QTY.	SIZE	LENGTH	MARK	TYPE	B	C	D
240	5	3' - 0"	PA502E	STR.	-	-	-
36	5	18' - 6¼"	PA503E	STR.	-	-	-
120	5	2' - 0"	PA504E	17	8"	8"	8"



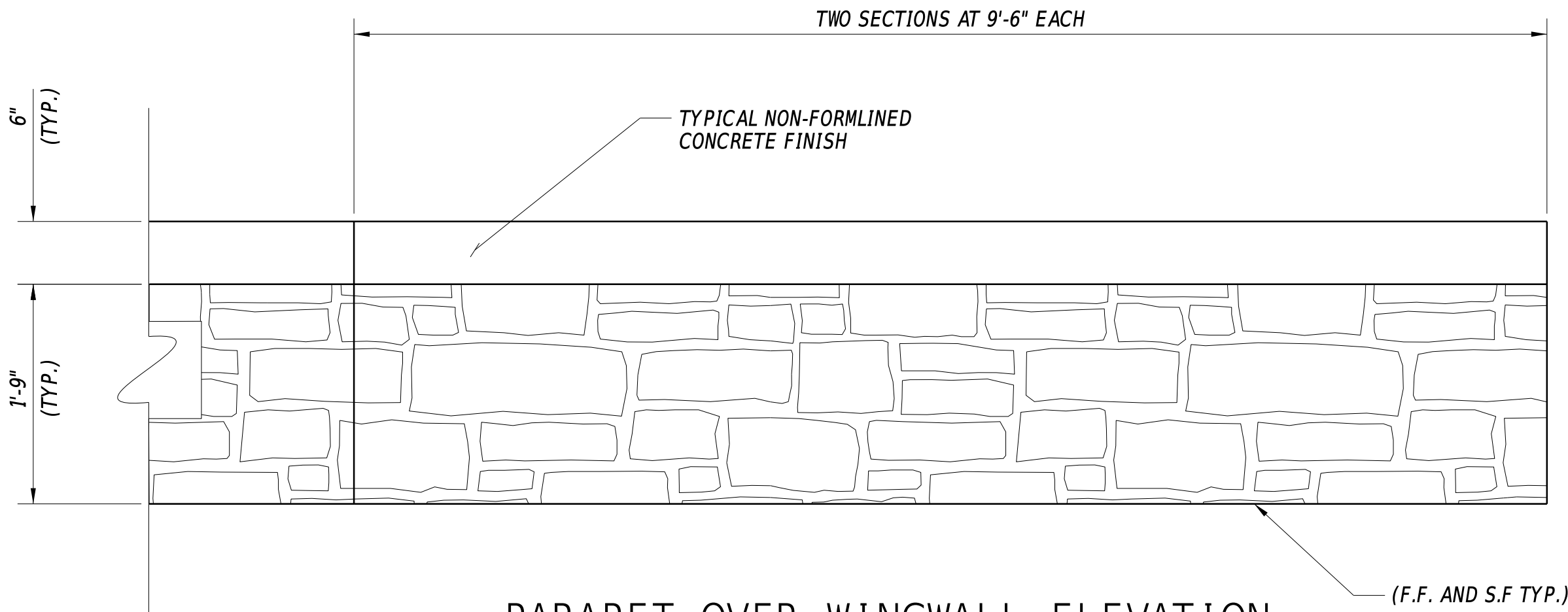
- NOTES:
- ALL DIMENSIONS SHOWN ARE TO THE EXTERIOR DESIGN FACE OF THE PARAPET TO ACCOUNT FOR 2" OF CLEAR COVER FOR EPOXY COATED REBAR. THESE DIMENSIONS DO NOT TAKE INTO ACCOUNT THE EXTRA THICKNESS NEEDED TO ACHIEVE THE FORMLINED FINISH AS SHOWN ON THE PLANS.
 - WALL FORM LINER PATTERN SHALL BE COLONIAL FIELD STONE OR SIMILAR. REFER TO SPECIAL PROVISION #610513 - FORM LINERS FOR FURTHER REQUIREMENTS.
 - THE SILICONE-BASED ACRYLIC CONCRETE SEALER, ITEM #613001, WITHIN THE PAYMENT LIMITS DEFINED ON THIS SHEET SHALL BE A COLOR THAT CLOSELY RESEMBLES THE COLOR OF THE PRE-CAST CONCRETE FRAME.
 - PARAPET IS SHOWN AS CAST-IN-PLACE. CONTRACTOR MAY CHOOSE TO PRECAST THE PARAPET AT NO ADDITIONAL COST. PAYMENT WILL BE MADE AT THE UNIT BID PRICE FOR THE PLAN QUANTITIES FOR THE RESPECTIVE CONCRETE AND BAR REINFORCEMENT PAY ITEMS.



PARAPET REINFORCEMENT
1" = 1'-0"



PARAPET OVER FRAME ELEVATION
1" = 1'-0"



PARAPET OVER WINGWALL ELEVATION
1" = 1'-0"

LEGEND

- E.F. = EACH FACE
F.F. = FILL FACE
S.F. = STREAM FACE
T&B = TOP AND BOTTOM

ADDENDA / REVISIONS

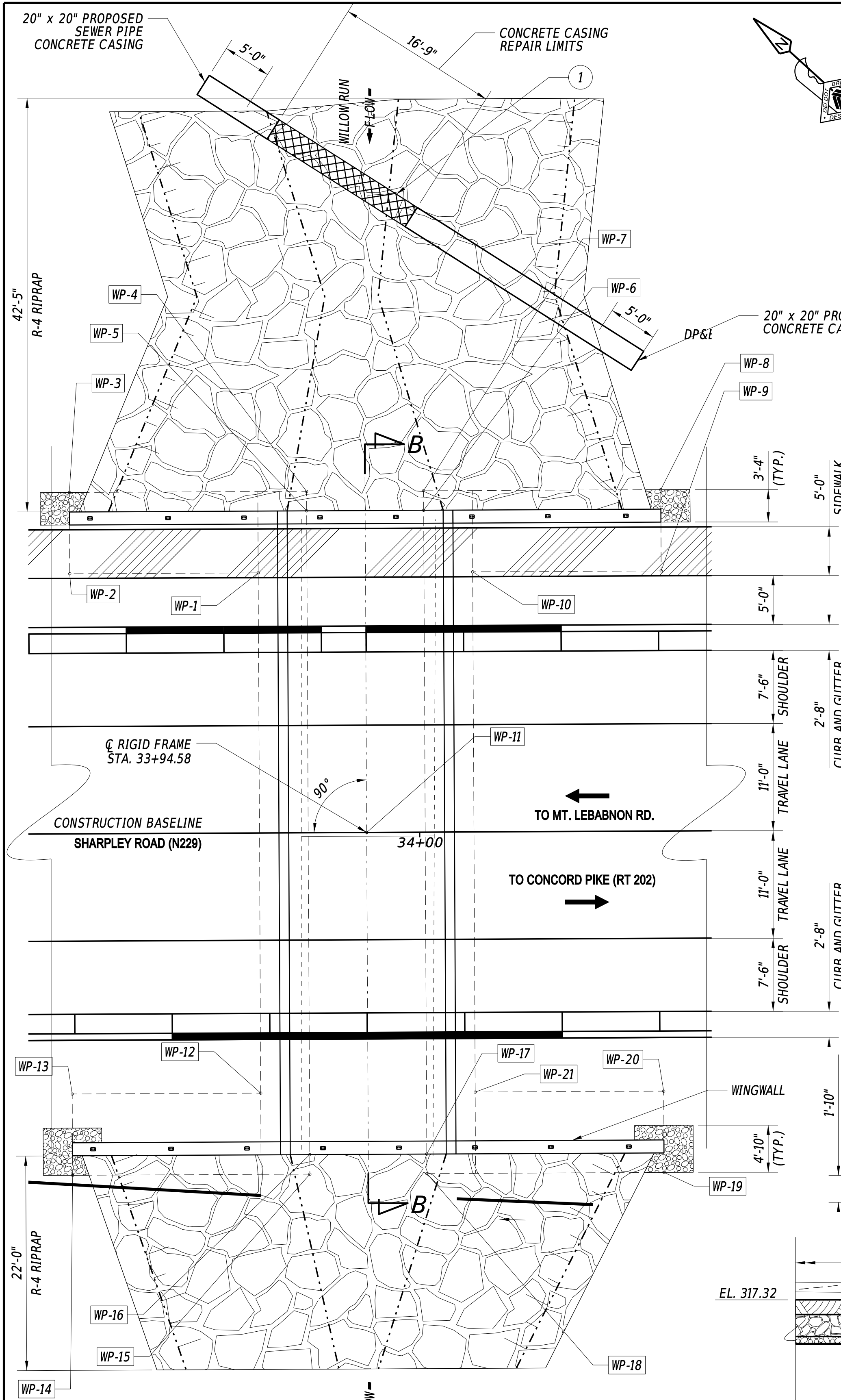
SCALE AS NOTED

BR 1-022 AND 1-525 ON
SHARPLEY ROAD

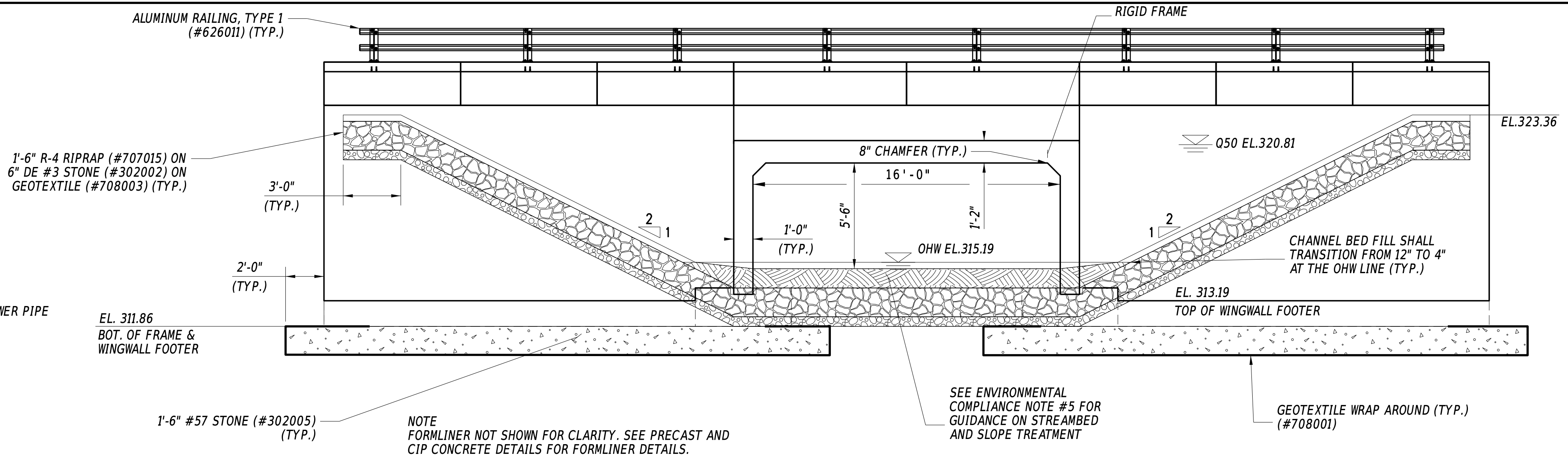
CONTRACT	BRIDGE NO.	1-525
T201807103	DESIGNED BY:	MAH
COUNTY	CHECKED BY:	JAT
NEW CASTLE		

PRECAST AND CIP
CONCRETE DETAILS

SECTION
BR
SHEET NO.
16



PLAN
1/8" = 1'



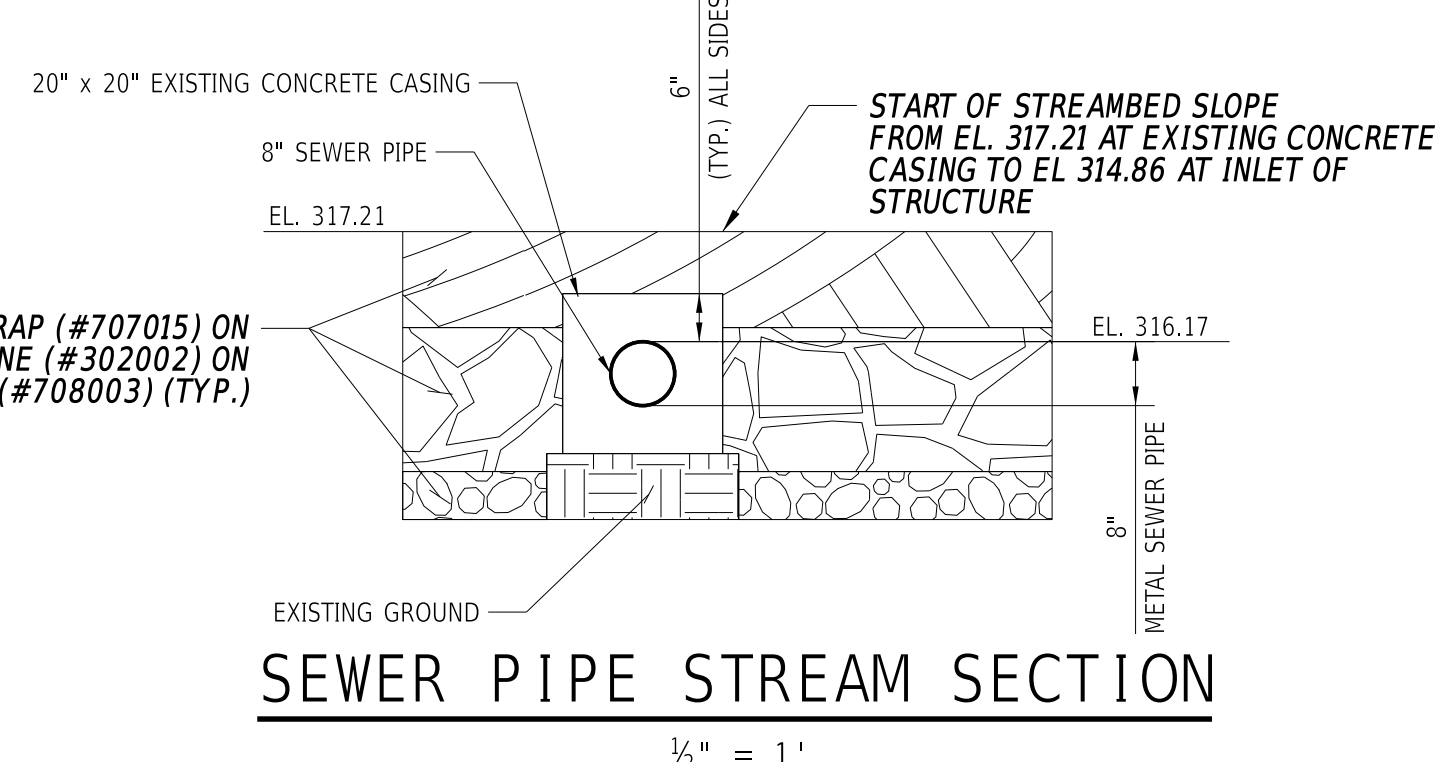
ELEVATION
1/4" = 1'

WORKING POINTS				
POINT NO.	STATION	OFFSET	NORTHING	EASTING
WP-1	33+83.58	-26.67	653514.8563	618052.1567
WP-2	33+63.74	-26.67	653529.4704	618038.7482
WP-3	33+63.74	-35.00	653535.1042	618044.8885
WP-4	33+88.58	-35.00	653516.8059	618061.6774
WP-5	33+88.58	-33.00	653515.4537	618060.2037
WP-6	34+00.58	-33.00	653506.6116	618068.3164
WP-7	34+00.58	-35.00	653507.9637	618069.7901
WP-8	34+25.41	-35.00	653489.6654	618086.5789
WP-9	34+25.41	-26.67	653484.0316	618080.4385
WP-10	34+05.58	-26.67	653498.6457	618067.0300
WP-11	33+94.58	0.00	653488.7233	618039.9448
WP-12	33+83.58	26.67	653478.7997	618012.8582
WP-13	33+63.74	26.67	653493.4138	617999.4497
WP-14	33+63.74	35.00	653487.7799	617993.3093
WP-15	33+88.58	35.00	653469.4816	618010.0981
WP-16	33+88.58	33.00	653470.8337	618011.5718
WP-17	34+00.58	33.00	653461.9916	618019.6846
WP-18	34+00.58	35.00	653460.6395	618018.2109
WP-19	34+25.41	35.00	653442.3412	618034.9997
WP-20	34+25.41	26.67	653447.9750	618041.1400
WP-21	34+05.58	26.67	653462.5891	618027.7315

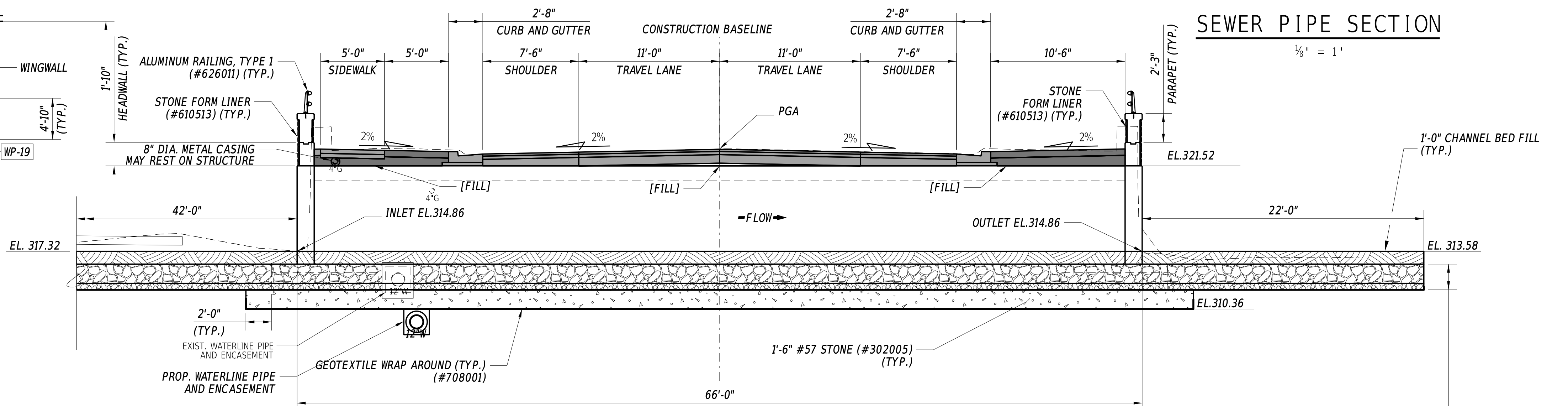
CONCRETE ENCASEMENT REPAIR

REPAIR NOTES
1 REHABILITATION - EXISTING SEWER PIPE CONCRETE ENCASEMENT ON UPSTREAM END OF BRIDGE.

- REHABILITATION OF EXISTING SEWER PIPE CONCRETE ENCASEMENT**
- ALL WORK INVOLVING METHODS OF CONCRETE REMOVAL; CLEANING OF CONCRETE SURFACE AND EXISTING REINFORCEMENT; REPAIRING OR REPLACING DAMAGED REINFORCEMENT AS RESULT OF CONSTRUCTION PREPARATION; AND CONCRETE PLACEMENT SHALL BE PERFORMED IN ACCORDANCE WITH SUBSECTION 628.03(E) OF THE STANDARD SPECIFICATIONS. PAYMENT INCIDENTAL TO 628042 - REHABILITATION OF PCC MASONRY.
 - EXTREME CARE MUST BE TAKEN WHEN CLEANING AND SCARIFYING THE EXISTING ENCASEMENT. WATER JETTING IS AN OPTION THAT CAN BE USED. THE CONTRACTOR IS NOT ALLOWED TO SAWCUT, JACKHAMMER, OR USE ANY OTHER METHOD OF REMOVING CONCRETE THAT MAY CAUSE DAMAGE TO THE SEWER PIPE THAT IS ENCASED IN THE CONCRETE CASING.
 - PER DELDOT SPEC 628.03 - CONTRACTOR IS TO SUBMIT FOR REVIEW AND COMMENT, FORMAL MEETING MINUTES, OR CONCRETE REPAIR WORK PLAN TO DOCUMENT THE CONTRACTOR'S PROPOSED MEANS AND METHODS DISCUSSED DURING THE PRECONSTRUCTION MEETING.



SEWER PIPE STREAM SECTION
1/2" = 1'

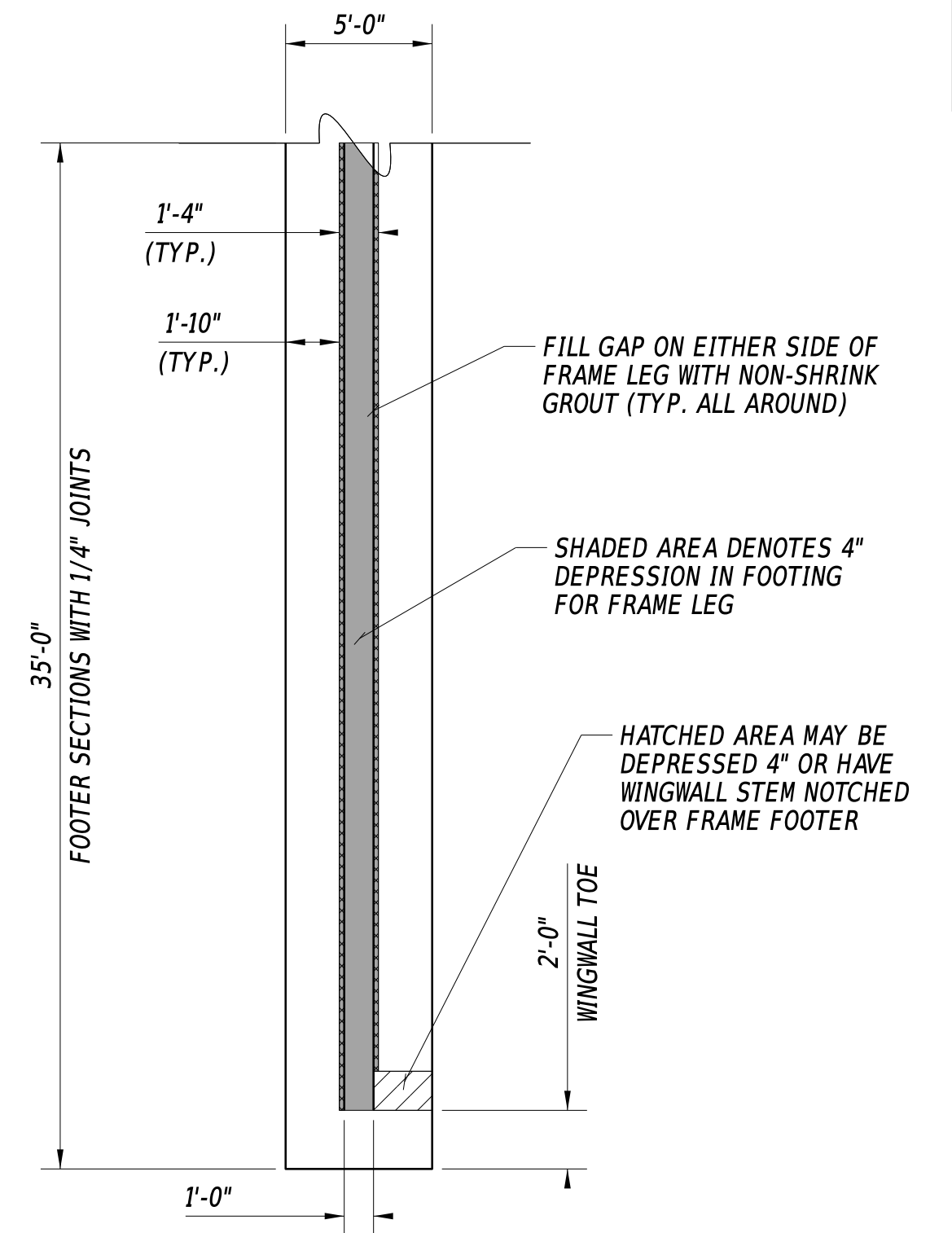
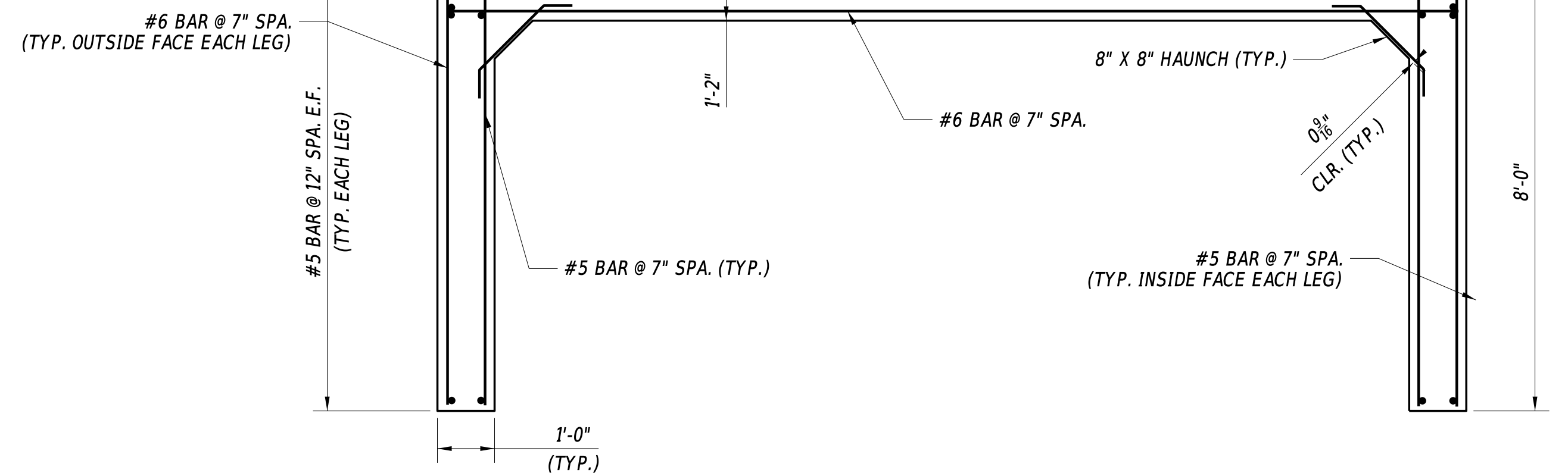


SECTION B-B
3/16" = 1'

SECTION B-B Note:
FILL GAPS BETWEEN STRUCTURE AND ROAD OR STRUCTURE AND TOPSOIL WHERE NOTED.
[FILL]: STRUCTURAL BACKFILL (BORROW, TYPE C) ITEM #207021

ADDENDA / REVISIONS		SCALE AS NOTED	BR 1-022 AND 1-525 ON SHARPLEY ROAD	CONTRACT		BRIDGE NO.		BRIDGE PLAN, SECTION AND ELEVATION	SECTION
				T201807103	NEW CASTLE		1-022		
				COUNTY		DESIGNED BY:	MAH		
						CHECKED BY:	JAT		
									BR
									SHEET NO.
									17

F. = EACH FACE
F. = FILL FACE
F. = STREAM FACE
&B = TOP AND BOTTOM


$$\frac{3}{16}'' = 1' - 0''$$
$$\frac{1}{4}'' = 1' - 0''$$


SECTION E-E

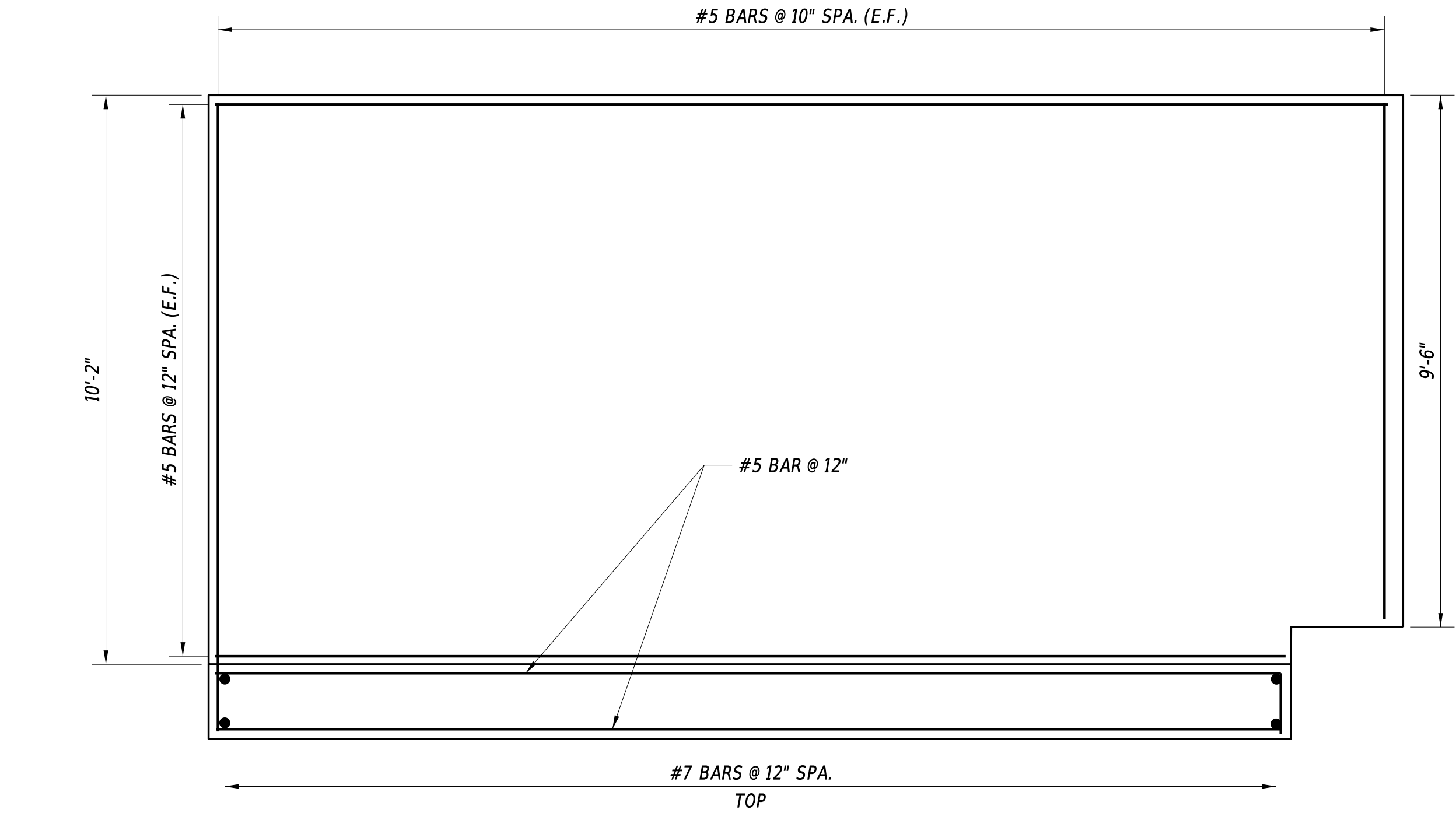
$$\frac{1}{2}'' = 1' - 0''$$

SECTION F-F

$$\frac{1}{2}'' = 1' - 0''$$

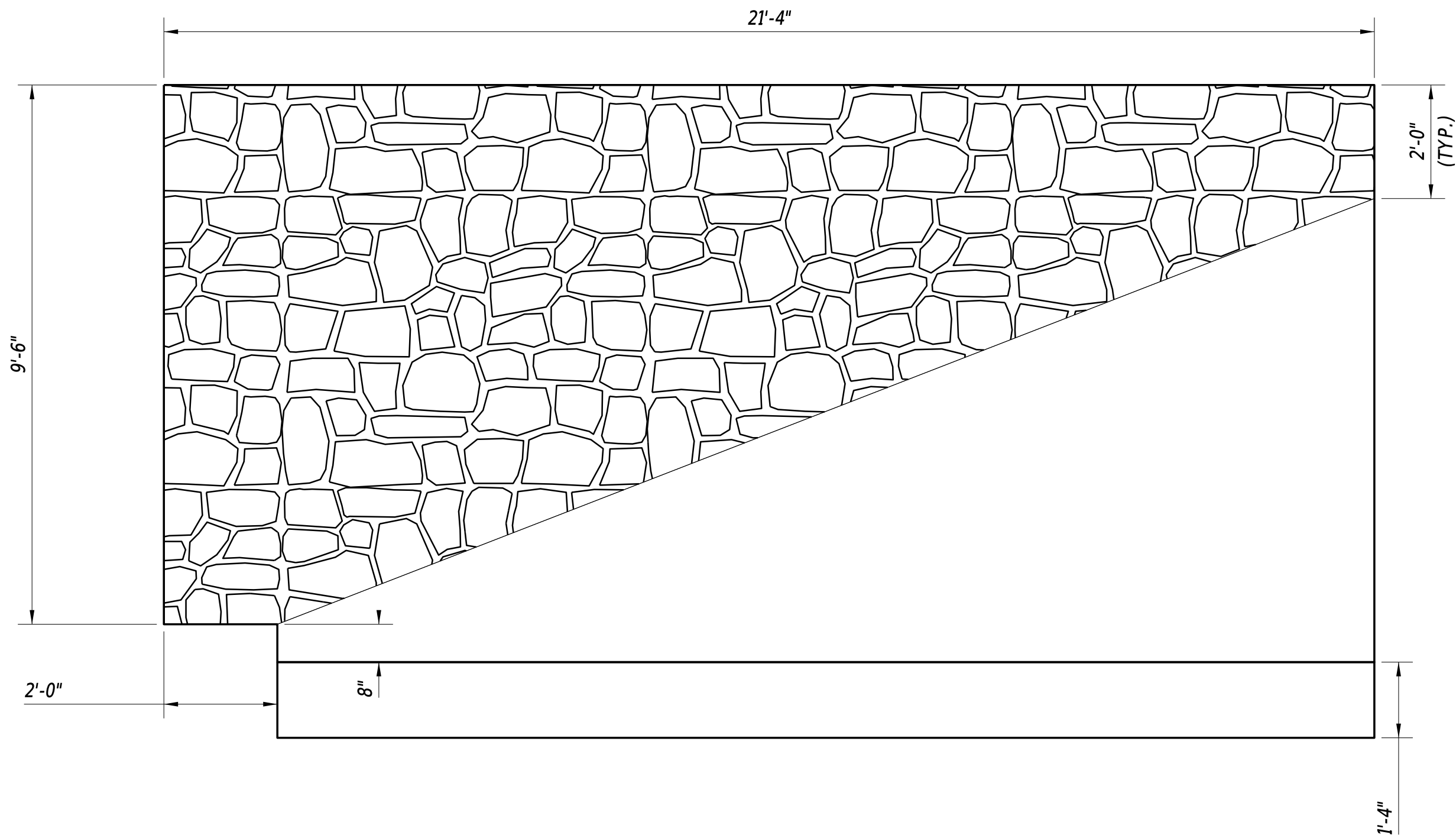
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23-NOV-2020
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WINGWALL REINFORCEMENT

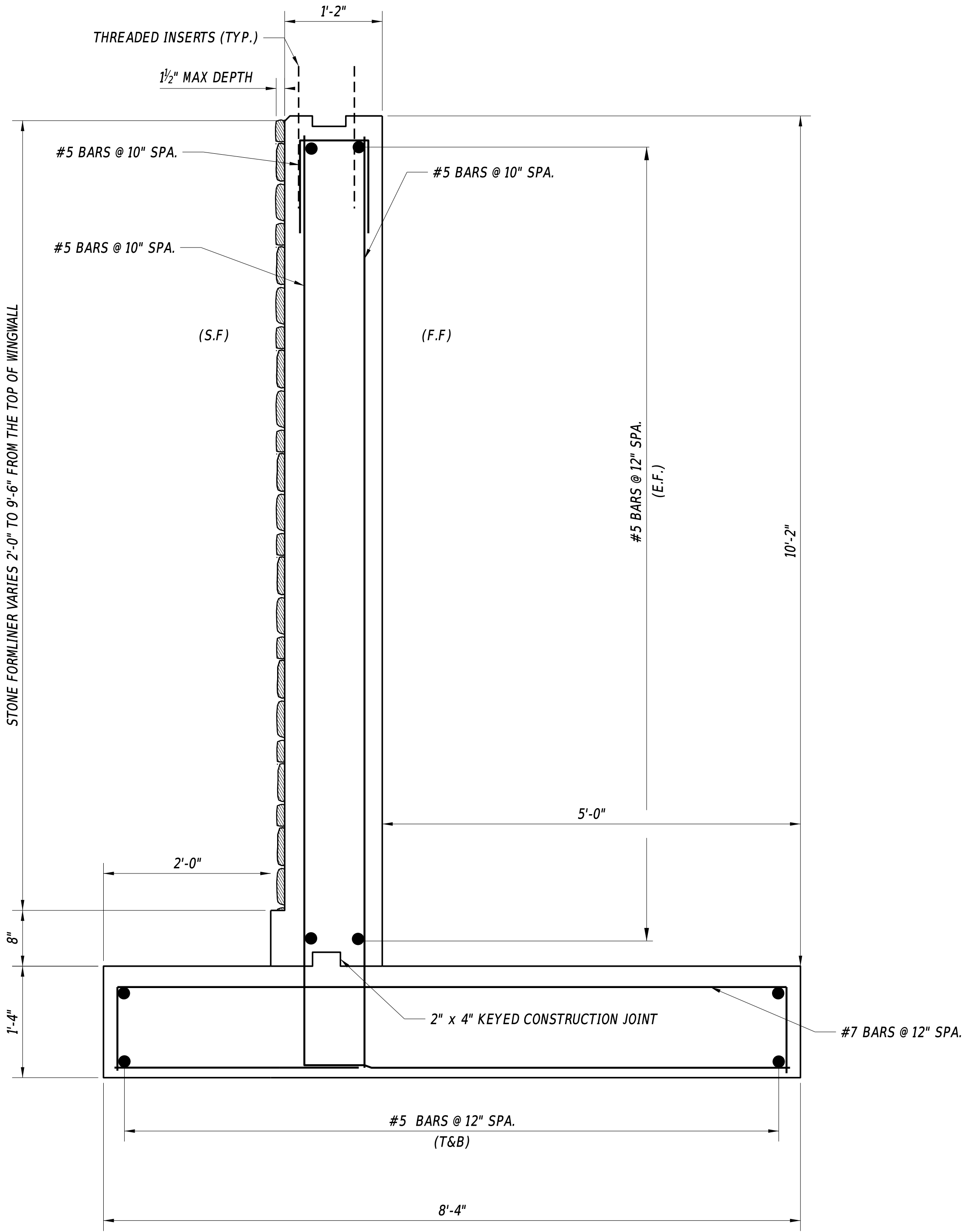
1/2" = 1' - 0"



WINGWALL ELEVATION (S.F)

1/2" = 1' - 0"

NOTE:
1. WALL FORM LINER PATTERN SHALL BE COLONIAL FIELD STONE OR SIMILAR. REFER TO SPECIAL PROVISION #610513 - FORM LINERS FOR FURTHER REQUIREMENTS.



WINGWALL DETAIL

(SECTION G-G)

1" = 1' - 0"

LEGEND

E.F. = EACH FACE
F.F. = FILL FACE
S.F. = STREAM FACE
T&B = TOP AND BOTTOM

ADDENDA / REVISIONS

SCALE AS NOTED

BR 1-022 AND 1-525 ON
SHARPLEY ROAD

CONTRACT

T201807103

COUNTY

NEW CASTLE

BRIDGE NO.

1-022

DESIGNED BY: MAH

CHECKED BY: JAT

PRECAST AND CIP
CONCRETE DETAILS

SECTION

BR

SHEET NO.

19

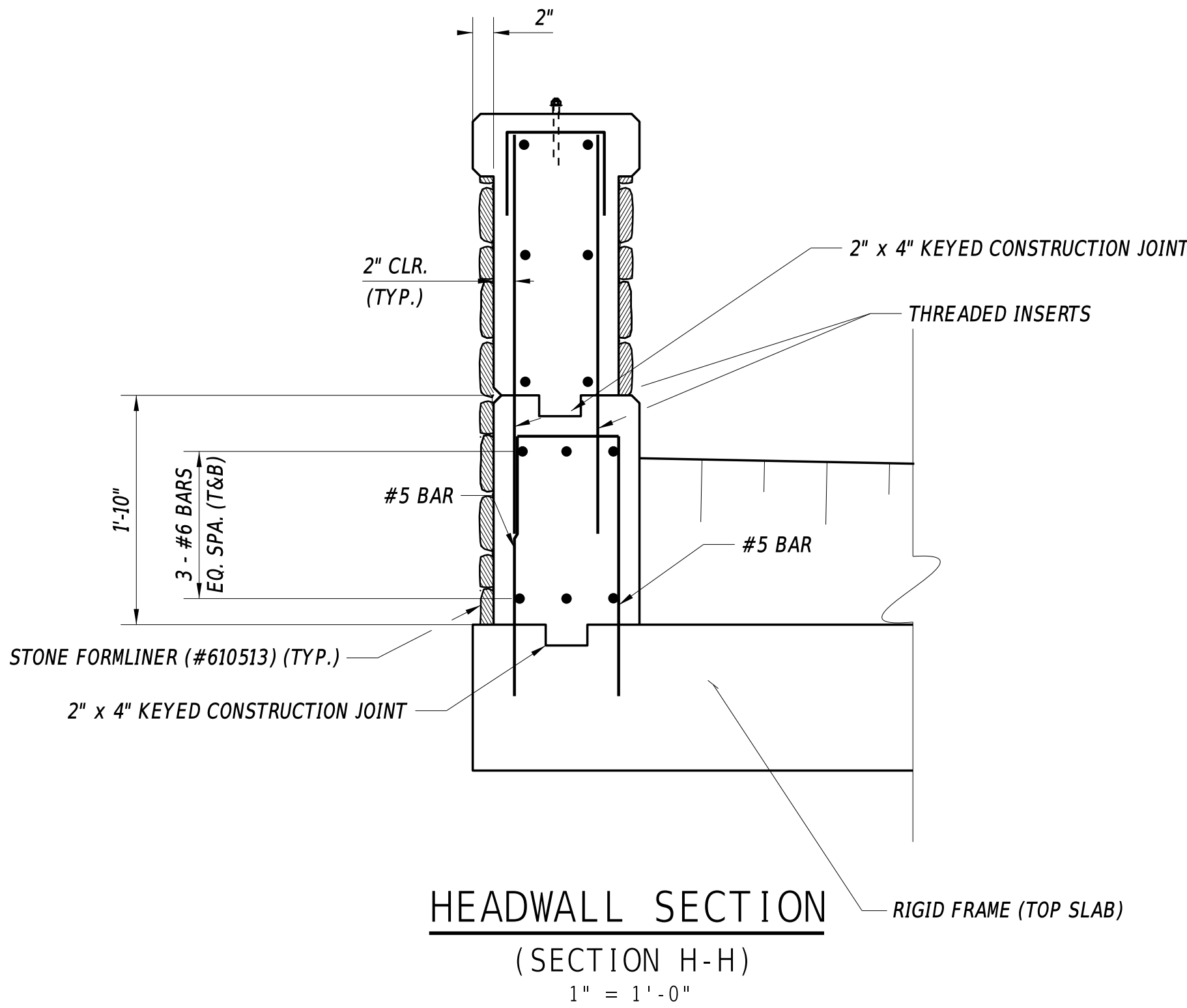
LEGEND

E.F. = EACH FACE

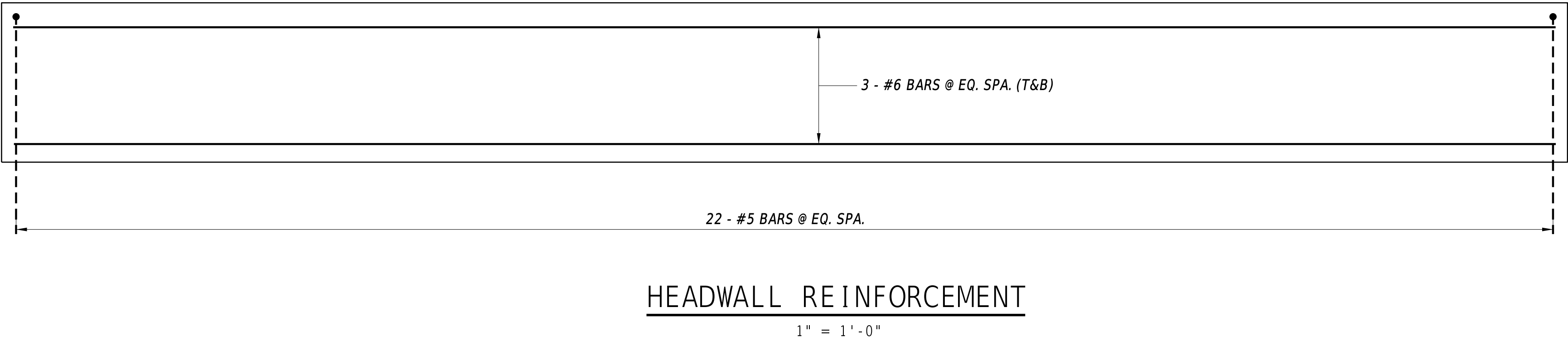
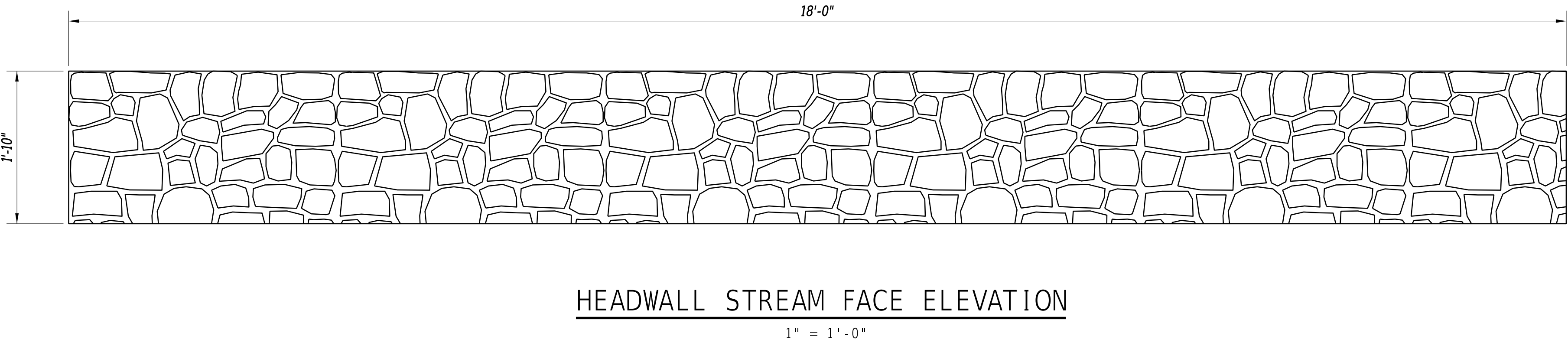
F.F. = FILL FACE

S.F. = STREAM FACE

T&B = TOP AND BOTTOM



- NOTES:
- ALL DIMENSIONS SHOWN ARE TO THE EXTERIOR DESIGN FACE OF THE HEADWALL TO ACCOUNT FOR 2" OF CLEAR COVER FOR EPOXY COATED REBAR. THESE DIMENSIONS DO NOT TAKE INTO ACCOUNT THE EXTRA THICKNESS NEEDED TO ACHIEVE THE FORMLINED FINISH AS SHOWN ON THE PLANS.
 - WALL FORM LINER PATTERN SHALL BE COLONIAL FIELD STONE OR SIMILAR. REFER TO SPECIAL PROVISION #610513 - FORM LINERS FOR FURTHER REQUIREMENTS.
 - HEADWALL IS SHOWN AS PRE-CAST. CONTRACTOR MAY CHOOSE TO CAST-IN-PLACE THE HEADWALL AT NO ADDITIONAL COST. PAYMENT WILL BE MADE AS INCIDENTAL TO ITEM #612001 - PRECAST RIGID FRAME.



ADDENDA / REVISIONS

SCALE AS NOTED

BR 1-022 AND 1-525 ON
SHARPLEY ROAD

CONTRACT

T201807103

COUNTY

NEW CASTLE

BRIDGE NO.

1-022

DESIGNED BY: MAH

CHECKED BY: JAT

PRECAST AND CIP
CONCRETE DETAILS

SECTION

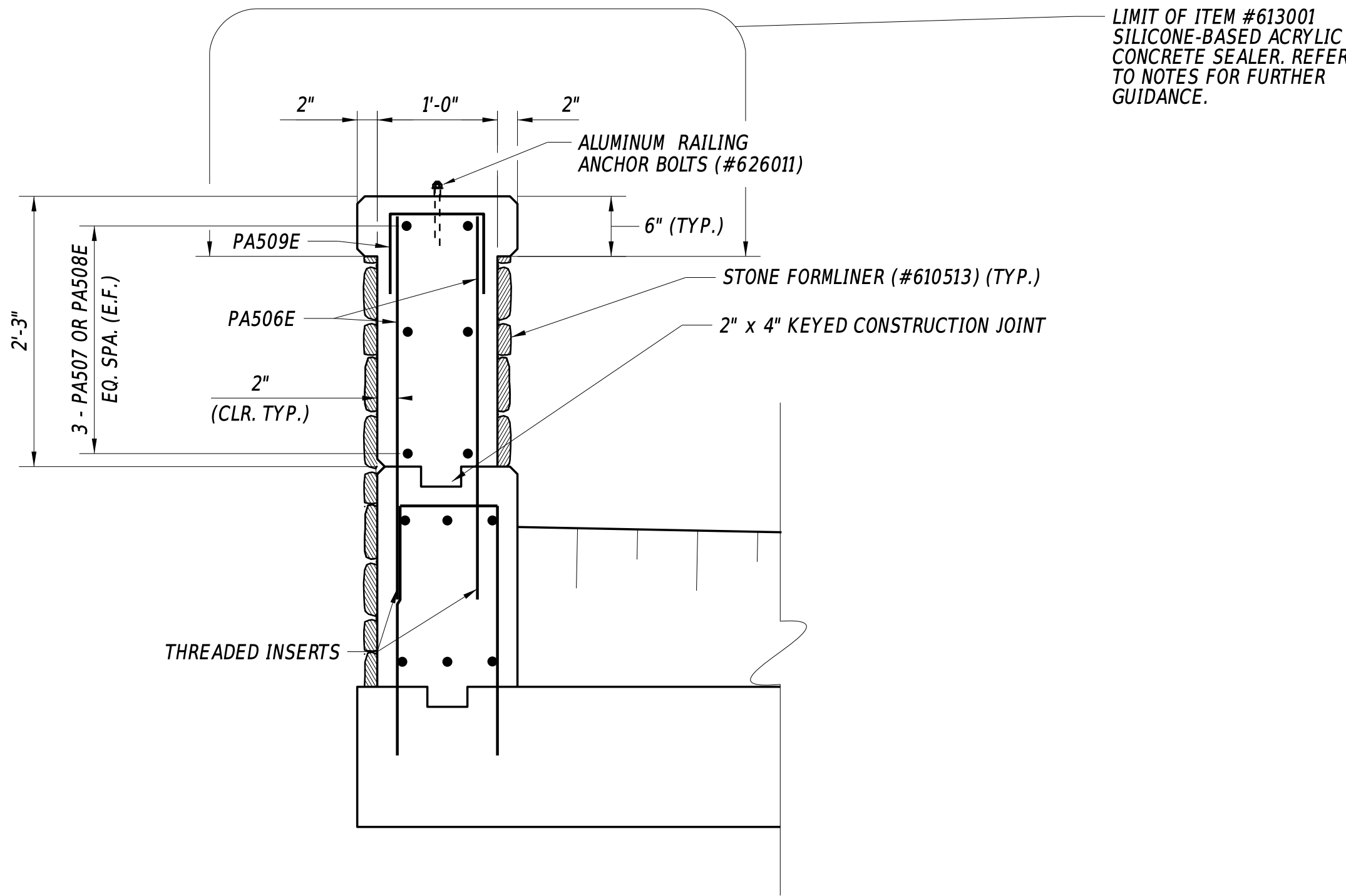
BR

SHEET NO.

20

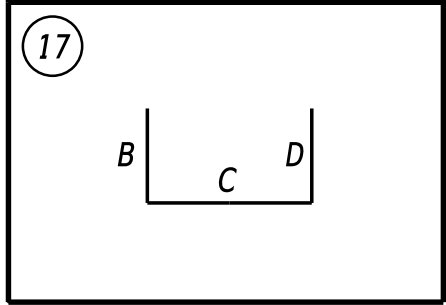
LEGEND

E.F. = EACH FACE
F.F. = FILL FACE
S.F. = STREAM FACE
T&B = TOP AND BOTTOM

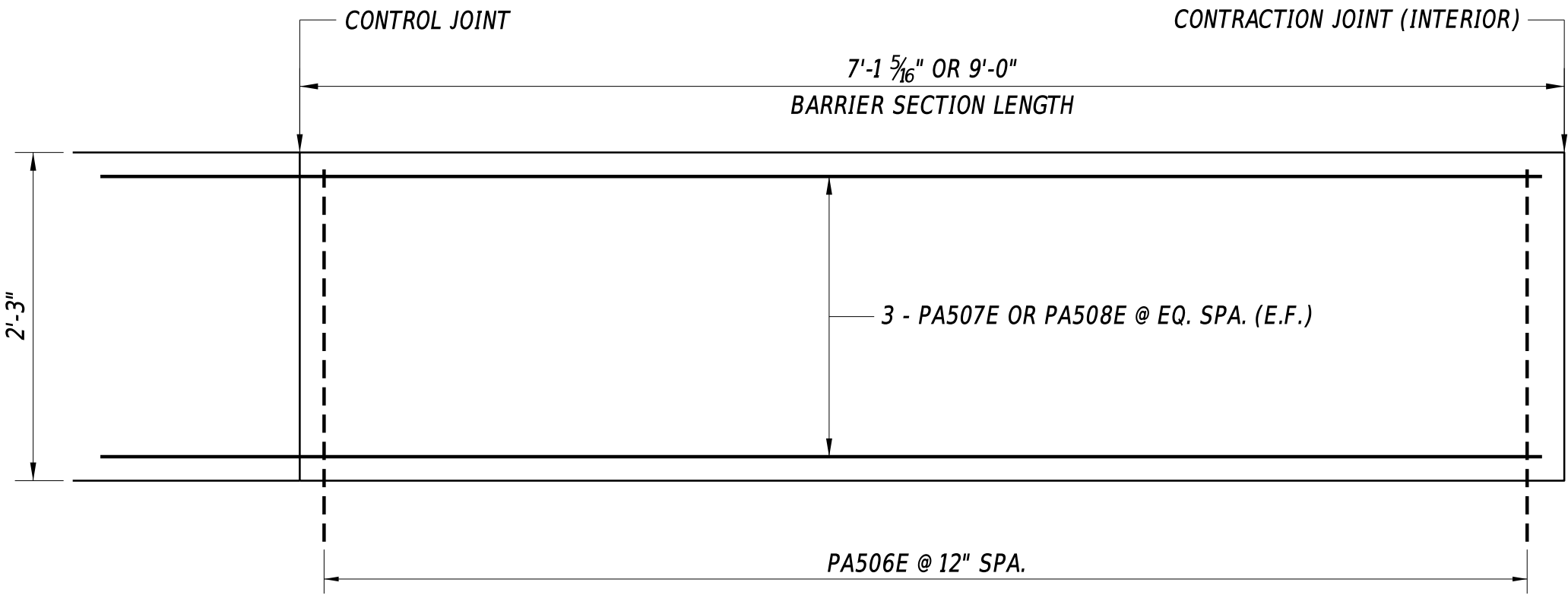


PARAPET SECTION
(SECTION H-H)
1" = 1' - 0"

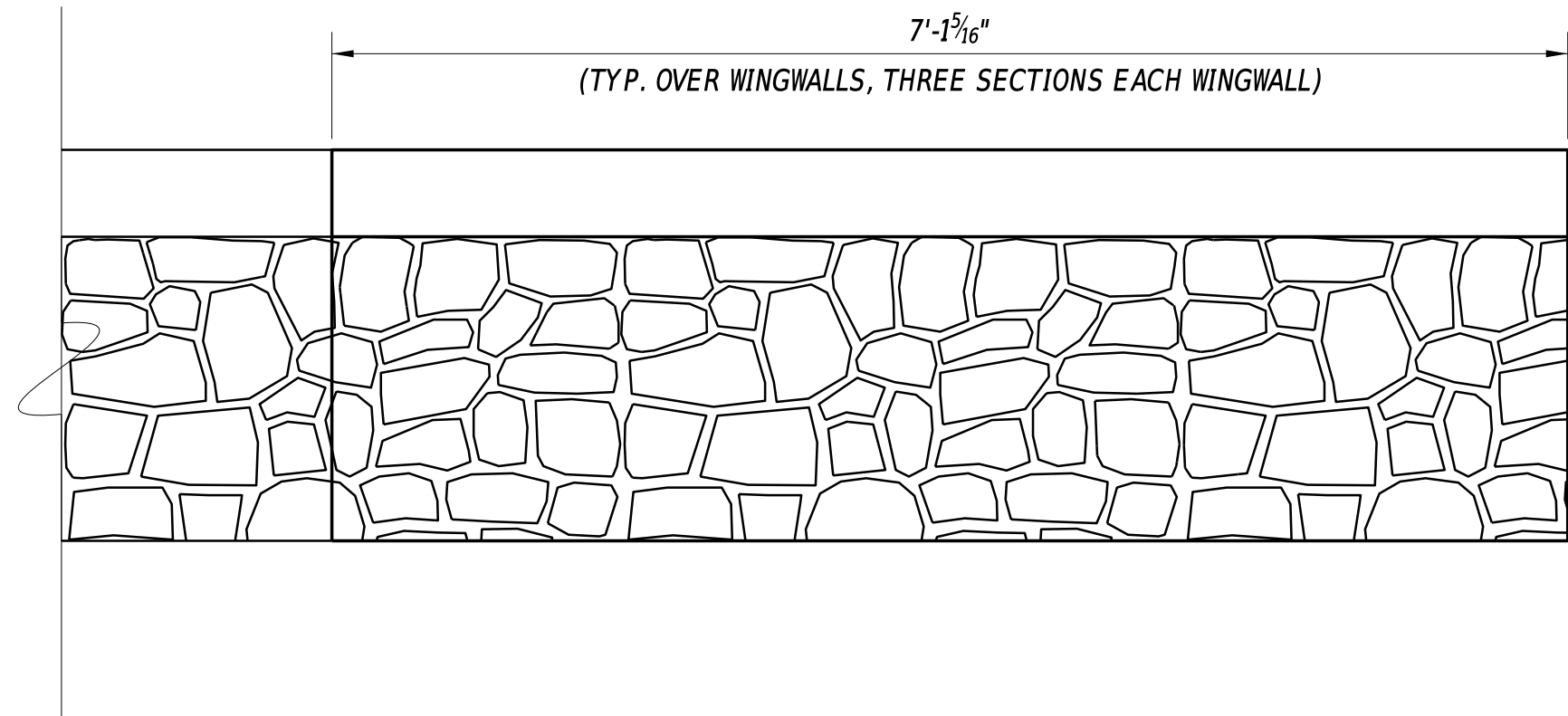
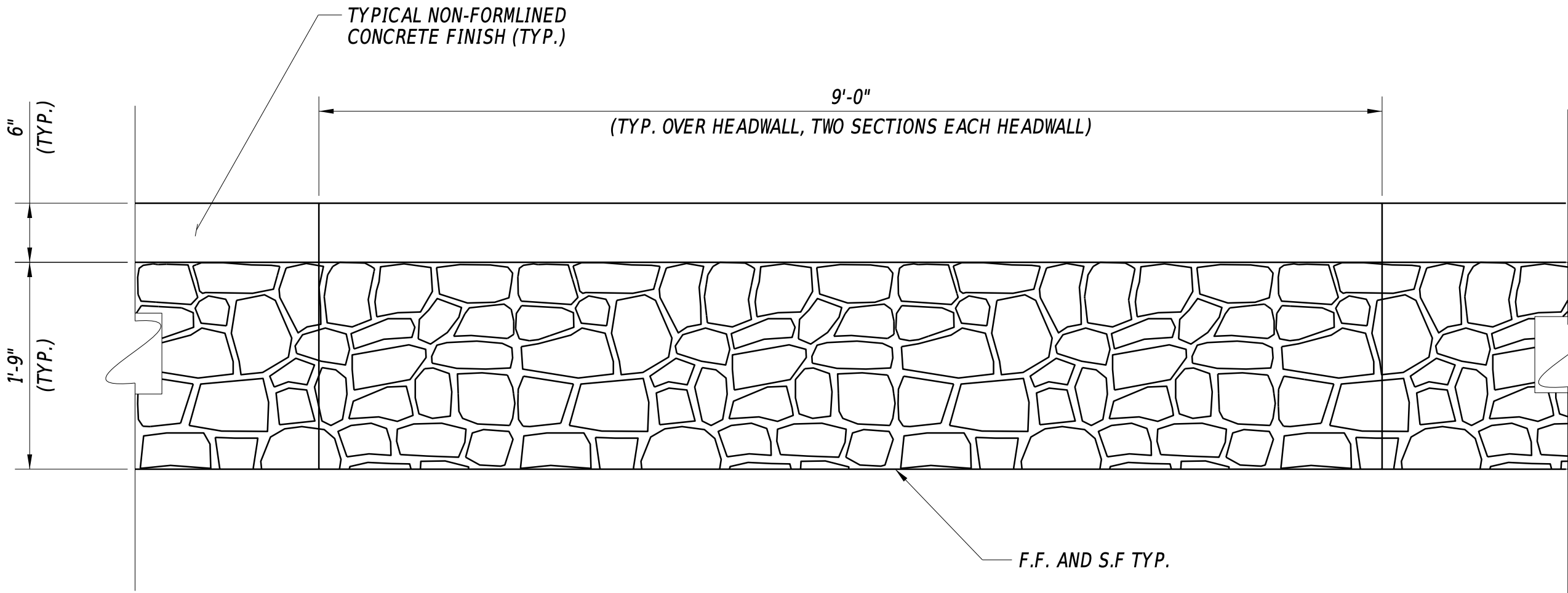
CONCRETE PARAPET REINFORCING BAR LIST							
QTY.	SIZE	LENGTH	MARK	TYPE	B	C	D
232	5	3' - 0"	PA506E	STR.	-	-	-
12	5	21' - 0"	PA507E	STR.	-	-	-
6	5	17' - 8"	PA508E	STR.	-	-	-
116	5	2' - 0"	PA509E	17	8"	8"	8"



- NOTES:
- ALL DIMENSIONS SHOWN ARE TO THE EXTERIOR DESIGN FACE OF THE PARAPET TO ACCOUNT FOR 2" OF CLEAR COVER FOR EPOXY COATED REBAR. THESE DIMENSIONS DO NOT TAKE INTO ACCOUNT THE EXTRA THICKNESS NEEDED TO ACHIEVE THE FORMLINED FINISH AS SHOWN ON THE PLANS.
 - WALL FORM LINER PATTERN SHALL BE COLONIAL FIELD STONE OR SIMILAR. REFER TO SPECIAL PROVISION #610513 - FORM LINERS FOR FURTHER REQUIREMENTS.
 - THE SILICONE-BASED ACRYLIC CONCRETE SEALER, ITEM #613001, WITHIN THE PAYMENT LIMITS DEFINED ON THIS SHEET SHALL BE A COLOR THAT CLOSELY RESEMBLES THE COLOR OF THE PRE-CAST CONCRETE FRAME.
 - PARAPET IS SHOWN AS CAST-IN-PLACE. CONTRACTOR MAY CHOOSE TO PRECAST THE PARAPET AT NO ADDITIONAL COST. PAYMENT WILL BE MADE AT THE UNIT BID PRICE FOR THE PLAN QUANTITIES FOR THE RESPECTIVE CONCRETE AND BAR REINFORCEMENT PAY ITEMS.

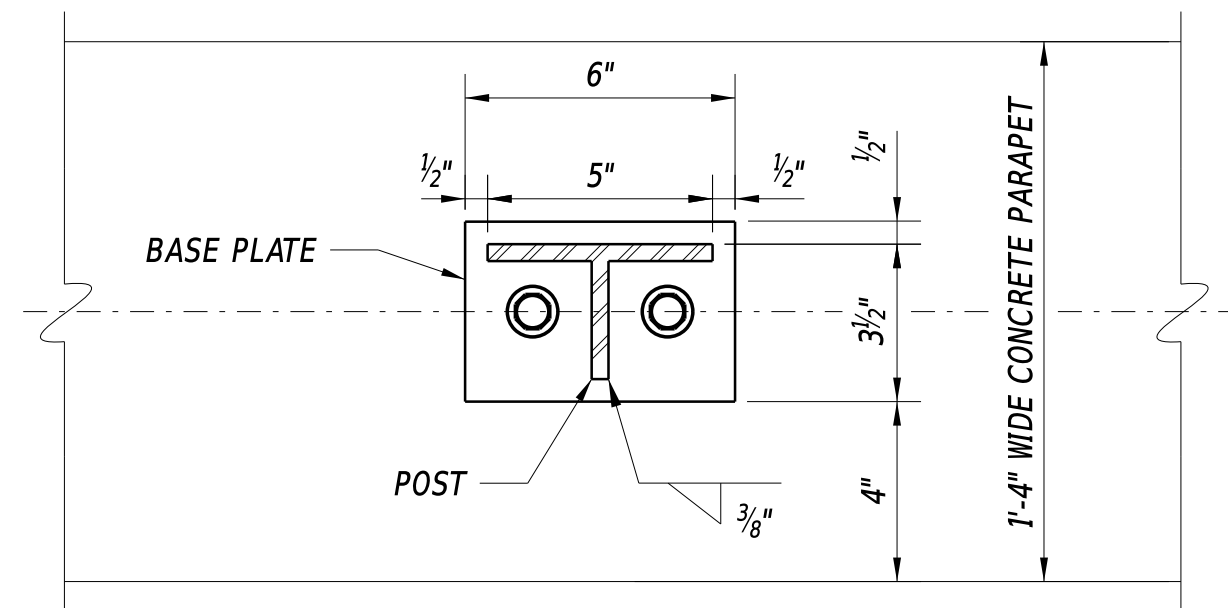


PARAPET REINFORCEMENT
1" = 1' - 0"



PARAPET ELEVATION
1" = 1' - 0"

ADDENDA / REVISIONS				SCALE AS NOTED	BR 1-022 AND 1-525 ON SHARPLEY ROAD	CONTRACT	BRIDGE NO.	1-022	PRECAST AND CIP CONCRETE DETAILS	SECTION
						T201807103	DESIGNED BY:	MAH		BR
						COUNTY	CHECKED BY:	JAT		SHEET NO.
						NEW CASTLE				21



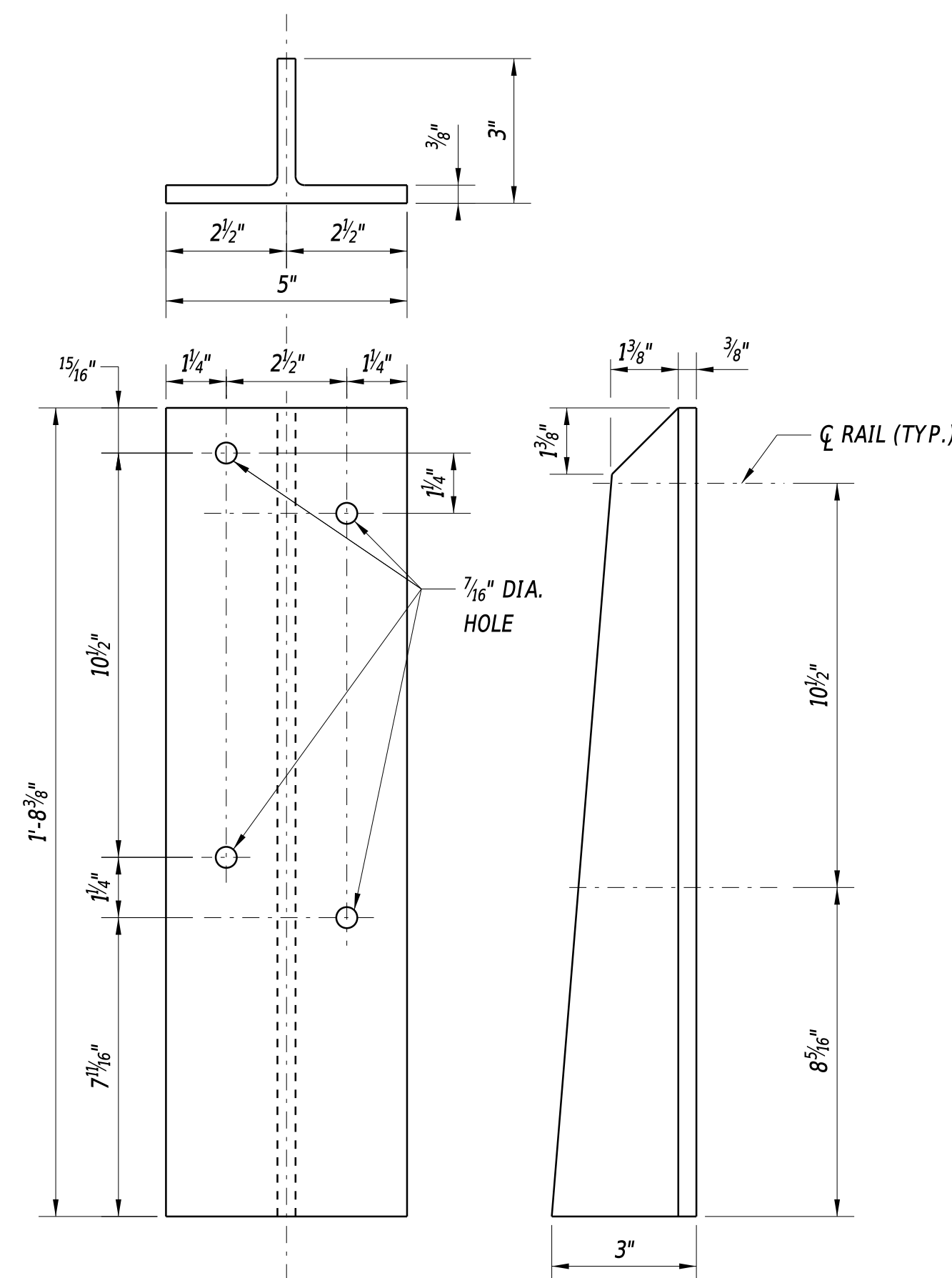
Technical drawing of a propeller hub with the following dimensions and tolerances:

- Overall width: $3\frac{3}{4}"$
- Overall height: $3\frac{1}{8}"$
- Top flange thickness: $\frac{1}{8}"$ (TYP.)
- Internal vertical slot width: $\frac{1}{8}"$ (TYP.)
- Internal horizontal slot width: $\frac{1}{2}"$ (TYP.)
- Internal horizontal slot depth: $\frac{1}{8}"$ (TYP.)
- Internal vertical slot depth: $\frac{1}{8}"$ (TYP.)
- Internal horizontal slot radius: $\frac{1}{16}"$ RADIUS (TYP.)
- Internal horizontal slot bottom thickness: $\frac{1}{8}"$ (TYP.)
- Internal horizontal slot bottom width: $\frac{3}{32}"$
- Internal horizontal slot bottom height: $\frac{1}{2}"$ (TYP.)
- Internal horizontal slot bottom radius: $3\frac{7}{8}"$

1. POSTS, RAILS, SPLICE SLEEVES, CLAMP BARS, AND ALUMINUM HEX NUTS MUST MEET REQUIREMENTS OF ASTM B-221 ALLOY 6061-T6.
2. BASE PLATES MUST MEET REQUIREMENTS OF ASTM B209 ALLOY 6061-T6.
3. END CAPS MUST MEET REQUIREMENTS OF ASTM B26 ALLOY 356-F.
4. ELASTOMERIC PADS MUST MEET REQUIREMENTS OF 60 +/- SHORE A DUROMETER.
5. STAINLESS STEEL HEX NUTS MUST MEET REQUIREMENTS OF ASTM A-307, GRADE A.
6. ANCHOR BOLTS MUST MEET REQUIREMENTS OF ASTM A-276 TYPE 304 OR TYPE 430 (THREADS TO BE ROLLED NOT CUT).
7. STAINLESS STEEL HEX HEAD CAP SCREWS (CLAMPS) MUST MEET REQUIREMENTS OF ASTM A-193, GRADE B-8.
8. ALUMINUM WASHERS MUST MEET REQUIREMENTS OF ASTM B-209 ALLOY ALCLAD 2024-T4.

Technical drawing of a rectangular plate with two holes. The plate dimensions are 6" wide and 4" high. The holes are 1" in diameter. The center-to-center distance between the holes is 3". The holes are positioned 1 1/2" from the left and right edges and 2" from the top and bottom edges. A leader line points to one hole with the text "1" DIA. HOLE (TYP.)".

NOTE: BASE PLATE 1/2" THICK. THE 1/8" THICK ELASTOMERIC PAD WILL HAVE IDENTICAL DIMENSIONS AS BASE PLATE WITH 1" DIA x 1 1/2" SLOTS.



NOTE: CAPS SHALL BE SPOT WELDED TO RAILS WITH WELDS
GROUND SMOOTH (3 WELDS REQUIRED FOR EACH CAP)

[illegible]

SLEEVE

23-NOV-2020
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BORING: SR-1		DATE DRILLED: 5/22/18			
STATION: 33+69.39		ELEVATION: 322.55		NORTHING: 653490.3503	
OFFSET: 25.10				EASTING: 618004.4267	
COMMENTS: N/A					
SAMPLE INFORMATION					
NO.	DEPTH	BLOWS / 6"	DESCRIPTION	CLASS / G.I.	REMARKS
1	0.0	3	NO SIEVE ANALYSIS - INDICATION OF WET STIFF GRAY FINE GRAVELLY SILT W/SOME FINE TO COARSE SAND AND CLAY.		
		4			
		5			
		9			
2	2.0	1	WET FIRM GRAY FINE GRAVELLY SILT W/SOME FINE TO COARSE SAND, TRACE OF CLAY.	A-4(0)	
		2			
		4			
		6			
U-1	4.0 6.0		WET GRAY SILT W/SOME FINE SAND, TRACE OF COARSE SAND.	A-4(0)	SHELBY TUBE - PRESS SAMPLE
3	6.0	13	WET DENSE GRAY COARSE SANDY FINE GRAVEL W/SOME FINE SAND, TRACE OF SILT.	A-1-A	
		18			
		14			
		20			
4	8.0	5	WET STIFF BROWN CLAYEY FINE GRAVELLY SILT W/SOME COARSE TO FINE SAND.	A-4(0)	
		6			
		7			
		9			
5	10.0	5	WET MEDIUM DENSE BROWN SILTY FINE GRAVEL W/SOME COARSE TO FINE SAND.	A-2-4(0)	BOTTOM OF FOOTER: 10.62 FT
		8			
		13			
		18			
6	12.0	20	WET MEDIUM DENSE BROWN SILTY COARSE SANDY FINE GRAVEL W/SOME FINE SAND AND CLAY.	A-1-B	
		11			
		15			
		16			
7	14.0	5	WET VERY STIFF BROWN FINE GRAVELLY CLAY W/SOME FINE SAND AND SILT, TRACE OF COARSE SAND.	A-7-6(16)	WATER LEVEL DEPTH: 14.6 FT
		6			
		14			
		7			
8	16.0	7	SATURATED VERY STIFF BROWN FINE SANDY CLAY W/SOME COARSE SAND AND SILT.	A-7-6(7)	
		9			
		10			
		4			
9	18.0	5	NO SIEVE ANALYSIS - INDICATION OF SATURATED STIFF BROWN FINE SANDY CLAY W/SOME COARSE SAND AND SILT.		
		6			
		7			
		7			
R-1	23.8 28.8		GRANITE		RECOVERY 100% RQD 83.3%
R-2	28.8 33.8				RECOVERY 100% RQD 85%
	33.8 33.8		END BORING		
BORING: SR-2		DATE DRILLED: 5/17/18			
STATION: 34+16.17		ELEVATION: 323.08		NORTHING: 653489.0846	
OFFSET: 23.99				EASTING: 618072.2455	
COMMENTS: N/A					
SAMPLE INFORMATION					
NO.	DEPTH	BLOWS / 6"	DESCRIPTION	CLASS / G.I.	REMARKS
1	0.0		MOIST GRAY SILTY FINE GRAVEL W/SOME FINE TO COARSE SAND, TRACE OF CLAY.	A-1-B	HOT-MIX 4" STONE 6"
	2.0				
2	2.0	4	WET STIFF GRAY SILTY CLAY W/SOME FINE SAND AND FINE GRAVEL, TRACE OF COARSE SAND.	A-6(10)	
		3			
		6			
		8			
3	4.0	9	WET VERY STIFF GRAY CLAYEY FINE SANDY SILT W/SOME COARSE SAND AND FINE GRAVEL.	A-4(2)	
		8			
		15			
		19			
4	6.0	9	WET VERY STIFF GRAY CLAYEY FINE GRAVELLY SILT W/SOME FINE TO COARSE SAND.	A-4(0)	
		8			
		9			
		9			
5	8.0	3	WET STIFF GRAY FINE GRAVELLY CLAY W/SOME COARSE TO FINE SAND AND SILT.	A-6(5)	
		5			
		4			
		5			
6	10.0	9	WET VERY STIFF GRAY COARSE SANDY CLAY W/SOME FINE SAND AND SILT, TRACE OF FINE GRAVEL.	A-7-6(11)	BOTTOM OF FOOTER: 10.62 FT
		9			
		9			
		9			
7	12.0	7	SATURATED VERY STIFF GRAY SILTY FINE SANDY CLAY W/SOME COARSE SAND.	A-7-5(9)	
		9			
		9			
		10			
8	14.0	3	SATURATED STIFF GRAY FINE TO COARSE SANDY CLAY W/SOME SILT, TRACE OF FINE GRAVEL.	A-7-6(5)	WATER LEVEL DEPTH: 15.0 FT
		4			
		6			
		9			
9	16.0	19	SATURATED VERY DENSE GRAY SILTY FINE TO COARSE SAND.	A-2-4(0)	
	18.0	50/5			
10	18.0	50/2	NO SIEVE ANALYSIS - INDICATION OF SATURATED VERY DENSE GRAY SILTY FINE TO COARSE SAND.		
	20.0				
R-1	23.0 28.0		GRANITE		RECOVERY 100% RQD 58%
R-2	28.0 33.0		GRANITE		RECOVERY 100% RQD 82%
	33.0 33.0		END BORING		

BORING: SR-3		DATE DRILLED: 5/24/18							
STATION: 6+08.24		OFFSET: 20.88		ELEVATION: 328.73					
		NORTHING: 654432.5599		EASTING: 615455.5276					
COMMENTS: N/A									
SAMPLE INFORMATION									
NO.	DEPTH	BLOWS / 6"	DESCRIPTION	CLASS / G.I.	REMARKS				
1	0.0	2	WET FIRM BROWN CLAYEY SILT W/TRACE FINE TO COARSE SAND.	A-4(5)					
		2							
		3							
		4							
2	2.0	7	WET STIFF BROWN SILTY CLAY W/SOME FINE SAND, TRACE OF COARSE SAND.	A-6(10)					
		7							
		6							
		8							
3	4.0	7	WET HARD BROWN SILTY CLAY W/TRACE FINE TO COARSE SAND AND FINE GRAVEL.	A-6(9)					
		7							
		28							
		50/3							
4	6.0	3	WET STIFF BROWN CLAYEY SILT W/SOME FINE SAND, TRACE OF COARSE SAND.	A-4(4)	WATER LEVEL DEPTH: 7.0 FT				
		6							
		8							
		12							
5	8.0	3	SATURATED FIRM BROWN SILTY CLAY W/SOME FINE SAND, TRACE OF COARSE SAND AND FINE GRAVEL.	A-7-6(11)					
		3							
		4							
		3							
6	10.0	5	SATURATED STIFF BROWN SILTY FINE SANDY CLAY W/TRACE COARSE SAND.	A-7-5(19)	BOTTOM OF FOOTER: 10.23 FT				
		7							
		7							
		7							
7	12.0	7	SATURATED VERY STIFF BROWN FINE TO COARSE SANDY SILT.	A-4(0)					
		9							
		8							
		9							
U-1	14.0 16.0				SHELBY TUBE - PRESS SAMPLE				
8	16.0	3	SATURATED STIFF BROWN FINE TO COARSE SANDY SILT.	A-4(0)					
		6							
		6							
		6							
9	18.0	2	SATURATED STIFF BROWN FINE SANDY CLAY W/SOME COARSE SAND AND SILT.	A-7-5(13)					
		6							
		7							
		6							
10	24.0	11	SATURATED VERY STIFF BROWN COARSE TO FINE SANDY SILT W/TRACE FINE GRAVEL.	A-5(0)					
		12							
		13							
		18							
11	29.0	5	SATURATED VERY STIFF BROWN FINE TO COARSE SANDY SILT W/TRACE FINE GRAVEL.	A-4(0)					
		10							
		14							
		20							
12	34.0	2	SATURATED LOOSE BROWN SILTY FINE TO COARSE SAND.	A-2-4(0)					
		2							
		4							
		4							
13	39.0	5	SATURATED HARD BROWN FINE TO COARSE SANDY SILT.	A-4(0)					
		18							
		12							
		9							
14	44.0 46.0	28	SATURATED VERY DENSE BROWN SILTY COARSE SAND W/SOME COARSE TO FINE SAND.	A-1-B					
		50/4							
15	48.0	41	SATURATED VERY DENSE BROWN FINE SAND AND FINE GRAVEL W/SOME COARSE SAND AND SILT.	A-1-B					
		42							
		50/5							
		50.0							
	50.0		END BORING						
	50.0								

BORING: SR-4		DATE DRILLED: 5/23/18			
STATION: 6+88.16		OFFSET: 24.02		ELEVATION: 328.73	
		NORTHING: 654452.4492		EASTING: 615544.9641	
COMMENTS: N/A					
SAMPLE INFORMATION					
NO.	DEPTH	BLOWS / 6"	DESCRIPTION	CLASS / G.I.	REMARKS
1	0.0	2	WET FIRM BROWN CLAYEY SILT W/SOME FINE TO COARSE SAND AND FINE GRAVEL.	A-4(1)	
		3			
		3			
2	2.0	2	WET LOOSE BROWN SILTY FINE SAND AND FINE GRAVEL W/SOME COARSE SAND.	A-2-4(0)	
		2			
		3			
3	4.0	2	WET SOFT BROWN FINE SANDY SILT W/SOME COARSE SAND AND FINE GRAVEL, TRACE OF CLAY.	A-4(0)	
		2			
		2			
4	6.0	2	WET FIRM BROWN CLAYEY FINE SANDY SILT W/SOME COARSE SAND AND FINE GRAVEL.	A-4(0)	
		2			
		3			
5	8.0	2	WET SOFT BROWN CLAYEY FINE SANDY SILT W/SOME FINE GRAVEL, TRACE OF COARSE SAND.	A-4(2)	
		2			
		2			
6	10.0	2	SATURATED STIFF BROWN FINE SANDY SILT W/SOME COARSE SAND, TRACE OF FINE GRAVEL.	A-4(0)	WATER LEVEL DEPTH: 9.8 FT
		7			
		5			
7	12.0	7	SATURATED DENSE BROWN SILTY COARSE TO FINE SAND W/SOME FINE GRAVEL.	A-2-5(0)	BOTTOM OF FOOTER: 10.23 FT
		29			
		11			
8	14.0	50/3	SATURATED DENSE BROWN SILTY COARSE TO FINE SAND W/SOME FINE GRAVEL.	A-2-5(0)	
		4			
		26			
9	16.0	28	SATURATED VERY DENSE BROWN COARSE SANDY FINE GRAVEL W/SOME FINE SAND AND SILT.	A-1-A	
		13			
		7			
10	18.0	11	SATURATED DENSE BROWN COARSE TO FINE SAND W/SOME FINE GRAVEL AND SILT.	A-1-B	
		12			
		13			
11	20.0	7	SATURATED STIFF BROWN FINE SANDY SILT W/SOME COARSE SAND, TRACE OF FINE GRAVEL.	A-4(0)	
		7			
		8			
12	22.0	13	SATURATED MEDIUM DENSE BROWN SILTY FINE TO COARSE SAND SAND.	A-2-4(0)	
		6			
		6			
13	24.0	9	SATURATED MEDIUM DENSE BROWN SILTY FINE SAND W/SOME COARSE SAND.	A-2-4(0)	
		4			
		9			
14	26.0	9	SATURATED MEDIUM DENSE BROWN SILTY FINE SAND W/SOME COARSE SAND.	A-2-4(0)	
		9			
		14			
15	28.0	12	SATURATED DENSE BROWN SILTY FINE SAND W/SOME COARSE SAND.	A-2-4(0)	
		14			
		19			
16	30.0	22	SATURATED DENSE BROWN SILTY FINE SAND W/SOME COARSE SAND.	A-2-4(0)	
		17			
		19			
17	32.0	28	SATURATED DENSE BROWN SILTY FINE SAND W/SOME COARSE SAND.	A-2-4(0)	
		34			
		50/5			
18	34.0	46.0	SATURATED VERY DENSE BROWN FINE SAND AND FINE GRAVEL W/SOME COARSE SAND AND SILT.	A-2-4(0)	
		50.0			
		50.0			
19	36.0	50.0	SATURATED VERY DENSE BROWN COARSE SANDY FINE GRAVEL W/SOME FINE SAND, TRACE OF SILT.	A-1-A	
		50.0			
		50.0			
20	38.0	50.0	END BORING		
		50.0			
		50.0			

ENVIRONMENTAL COMPLIANCE NOTES

1. GENERAL NOTES

- A. THE PURPOSE OF THIS SHEET IS TO IDENTIFY THOSE ITEMS ASSOCIATED WITH ENVIROMENTAL COMPLIANCE. IMPACT CALCULATIONS ARE FOR THE AGENCY PERMIT REPORTING PURPOSES ONLY AND ARE NOT TO BE USED FOR BIDDING PURPOSES.
- B. IF A DEPARTURE FROM THE APPROVED PLANS (WHICH WOULD AFFECT ANY NATURAL AND/OR CULTURAL RESOURCES) IS NECESSARY, CONTACT THE ENVIRONMENTAL STUDIES SECTION (302)760-2259 OR DOT_ENVIRONMENTALSTUDIES@DELAWARE.GOV) TO ALLOW FOR COORDINATION WITH THE APPROPRIATE RESOURCE AGENCIES AND APPROVAL.
- C. USE OF THIS SHEET DOES NOT ALLEVIATE THE CONTRACTOR'S RESPONSIBILITY TO COMPLY WITH ALL CONDITIONS SET FORTH IN THE ENVIRONMENTAL STATEMENT AND PERMITS.

2. NATURAL RESOURCE ISSUES:

A. PERMIT REQUIREMENTS/APPROVALS*:

U.S. ARMY CORPS OF ENGINEERS (COE): NWP # 23 (PCN REQUIRED)**
DNREC - WETLANDS & SUBAQUEOUS LANDS (WLSL): PROJECT CONSISTENT WITH DEL CODE CH. 72 SECTION 7217, SPECIAL EXEMPTION (B)
DNREC - WATER QUALITY (WQC) & COASTAL ZONE CONSISTENCY (CZM): ISSUED (PROJECT IS NOT LOCATED IN CRW)
NCC DEPT. OF LAND USE (NCC): FLOODPLAIN PERMIT**

* THE PERMITS/APPROVALS LISTED ARE THOSE REQUIRED FOR THIS PROJECT. THE ENVIRONMENTAL STUDIES SECTION IS RESPONSIBLE FOR COORDINATING AND/OR OBTAINING THESE APPROVALS.
** THE CONTRACTOR MUST ENSURE THAT THESE PERMITS/APPROVALS ARE IN THEIR POSSESSION PRIOR TO BEGINNING CONSTRUCTION IN THE PERMITTED AREA(S) AND ENSURE THEY ARE DISPLAYED ON-SITE DURING THE ENTIRE CONSTRUCTION PERIOD.

B. CONSTRUCTION RESTRICTIONS:

FISHERIES - NONE
ENDANGERED SPECIES - REFER TO NOTE 7 FOR BOG TURTLE CONSIDERATION AT BR 1-525/ NONE AT BR 1-022
MIGRATORY BIRDS - NONE

3. CULTURAL RESOURCE ISSUES:

- A. AGREEMENT WITH THE DE STATE HISTORIC PRESERVATION OFFICE (DE SHPO), FEDERAL HIGHWAY ADMINISTRATION (FHWA) AND ADVISORY COUNCIL ON HISTORIC PRESERVATION (ACHP), THERE ARE NO CULTURAL RESOURCE CONCERNS AS LONG AS THE PROJECT SCOPE IS NOT MODIFIED AND ALL STAGING AND STOCKPILING REMAIN WITHIN THE EXISTING ROADWAY FOOTPRINT. SHOULD IT BE NECESSARY TO ADD ADDITIONAL ACCESS LOCATIONS, OTHER STOCKPILING/STAGING AREAS, OR OTHERWISE ALTER THE SCOPE OF THE PROJECT, DELDOT ENVIRONMENTAL STUDIES STAFF WILL NEED TO REVIEW THESE CHANGES FOR POTENTIAL CULTURAL RESOURCES CONCERNS.

4. PROTECTION OF RESOURCES:

- A. KEEP CLEARING IN WETLAND AREAS TO A MINIMUM ABSOLUTELY NECESSARY FOR CONSTRUCTION ACCESS. SUPPORT ALL EQUIPMENT TRAVERSING WETLANDS AND SUBAQUEOUS LAND ON MATS. PAYMENT FOR MATS WILL BE MADE UNDER ITEM #621500 - TEMPORARY TIMBER MAT. IN WETLAND AREAS THAT ARE CLEARED, NO GRUBBING EXCEPT WHERE NECESSARY TO CONSTRUCT PROJECT COMPONENTS SUCH AS FOUNDATIONS AND RIPRAP PROTECTION IS PERMITTED. CUT VEGETATION FLUSH WITH THE GROUND (I.E. NO DISTURBANCE OF THE ROOT MAT). RESTORE TEMPORARILY DISTURBED WETLAND AREAS TO GRADE AND SEED WITH TEMPORARY GRASS SEEDING (ANNUAL RYEGRASS), INCIDENTAL TO ITEM #901503.
- B. USE SILT FENCE OR CONSTRUCTION SAFETY FENCE ALONG THE LIMITS OF CONSTRUCTION IN ALL AREAS WHERE WATER/WETLANDS ARE BEING IMPACTED (AS SHOWN ON ENVIRONMENTAL COMPLIANCE SHEETS), AND ALSO IN ANY AREA WHERE WATER/WETLANDS EXIST WITHIN 20 FEET OF THE LIMIT OF CONSTRUCTION (AS SHOWN ON CONSTRUCTION PLAN SHEETS). ANY CONTRACTOR ACCESS BEYOND THE LIMIT OF CONSTRUCTION IS STRICTLY PROHIBITED.
- C. USE SANDBAGS OR COMPOST FILTER LOG (CFL) TO SECURE SILT FENCE AT AREAS ADJACENT TO WOODED UPLANDS/ ALL WETLANDS IN LIEU OF TRENCHING UNLESS PROPER EROSION AND SEDIMENT CONTROL CANNOT BE MAINTAINED. REMOVE SANDBAGS AND CFLS (AND CONTENTS) IN THEIR ENTIRETY WHEN NO LONGER NEEDED. SANDBAGS/CFLS USED TO SECURE THE SILT FENCE IS INCIDENTAL TO ITEM #901503. THE ENVIRONMENTAL STUDIES SECTION (302-760-2259 OR DOT_ENVIRONMENTALSTUDIES@DELAWARE.GOV) CAN PROVIDE FURTHER GUIDANCE REGARDING THIS METHOD OF INSTALLATION.
- D. CLEARLY MARK ALL TREES TO BE REMOVED WITH PAINT PRIOR TO THE EROSION AND SEDIMENT CONTROL MEETING.

5. STREAM RESTORATION AND RIPRAP TREATMENT:

- A. FOLLOW THE SPECIAL PROVISION FOR ITEM #707500 - CHANNEL BED FILL IN REGARDS TO THE SALVAGING OF ON-SITE NATURAL STREAM BOTTOM MATERIAL OR THE FURNISHING OF OFF-SITE MATERIAL. IF SUFFICIENT SOURCES FOR CHANNEL BED FILL DO NOT EXIST ON-SITE, ANY NEW MATERIAL MUST CONFORM TO THE REQUIREMENTS OF ITEM #707500 - CHANNEL BED FILL. RECESS ALL RIPRAP IN THE CHANNEL BOTTOM (I.E. BELOW THE WATER LINE) ONE FOOT BELOW STREAM BED ELEVATION AND CHOKE WITH BORROW TYPE B, SO THAT ALL OF THE VOIDS IN THE RIPRAP ARE FILLED WITH SPECIFIED MATERIAL. PAYMENT UNDER ITEM #209002 - BORROW, TYPE B. COVER THE RIPRAP WITH A MINIMUM OF 12" CHANNEL BED FILL. MATCH THE FINAL CHANNEL ELEVATIONS WITH EXISTING ELEVATIONS AT THE UPSTREAM AND DOWNSTREAM PROJECT LIMITS. THROUGH THE STRUCTURE, ELEVATIONS WILL BE AS NOTED ON THE PLANS. PAYMENT UNDER ITEM #707500 - CHANNEL BED FILL.
- B. RESTORE OTHER AREAS OF THE CHANNEL BOTTOM AFFECTED BY CONSTRUCTION (INCLUDING, BUT NOT LIMITED TO, THE LOCATION OF SUMP PITS, STABILIZED OUTFALLS, TEMPORARY PIPES AND/OR SANDBAG DIKES AND DIVERSIONS) TO EXISTING CONDITIONS. FILL ANY CAVITIES OR SCOUR HOLES RESULTING FROM CONSTRUCTION ACTIVITIES WITH CHANNEL BED FILL. PAYMENT UNDER ITEM #707500 - CHANNEL BED FILL.
- C. WHEN ALL EROSION AND SEDIMENT CONTROL MEASURES ARE REMOVED AND THE STREAM RETURNS TO ITS NATURAL FLOW CONDITIONS, THE FLOW MUST REMAIN ABOVE GROUND AND ABOVE THE RIPRAP (I.E. THE FLOW CANNOT BE "LOST" IN THE RIPRAP OR BENEATH THE STRUCTURE). IF THIS IS NOT ACHIEVED, THE CONTRACTOR WILL BE REQUIRED TO TAKE CORRECTIVE ACTION AT THE CONTRACTOR'S EXPENSE.
- D. CHOKE ALL RIPRAP ON THE STREAM BANK, OUTSIDE THE CHANNEL BED, WITH DELAWARE #57 STONE. PLACE JUST ENOUGH CHOKE MATERIAL TO PREVENT THE LOSS OF CHANNEL BED FILL OR TOPSOIL (DEPENDING ON LOCATION AS INDICATED BELOW) THROUGH THE RIPRAP.
1. BENEATH THE BRIDGE: AFTER PLACING DELAWARE #57 STONE, PERFORM A FINAL CHOKE OF CHANNEL BED FILL SO THAT THE RIPRAP PEAKS ARE BARELY VISIBLE. PAYMENT UNDER ITEM 707500 - CHANNEL BED FILL. DELAWARE #57 STONE IS INCIDENTAL TO THE RIPRAP ITEM.
2. ALL OTHER LOCATIONS: FINISH FILLING THE VOIDS WITH TOPSOIL ITEM #908001 SO THAT THE RIPRAP PEAKS ARE BARELY VISIBLE. PLACE AN ADDITIONAL 4-INCH TOPSOIL LAYER ON TOP OF THE RIPRAP. SLOPE SEEDING WILL BE DONE WITH ITEM 908019 - STREAMBANK SEED MIX, SEEDING. FOLLOWING THE SEEDING OPERATION, INSTALL ITEM #908020 - EROSION CONTROL BLANKET (ECB) MULCH, OR OTHER BLANKET AS SHOWN ON THE PLANS. ECB AT TOE OF SLOPE CAN BE EITHER TRENCHED IN OR STAPLED AT 6" ON CENTER. COMPLETE ALL WORK, STARTING WITH THE INITIAL CHOKING WITH TOPSOIL THROUGH THE SEEDING AND MULCHING PRIOR TO ANY RAIN EVENT. DELAWARE #57 STONE IS INCIDENTAL TO THE RIPRAP ITEM. ALL OTHER ITEMS WILL BE PAID FOR UNDER THEIR RESPECTIVE ITEMS.
- E. THE TOPSOIL/SEED/MULCH CAN BE PLACED BEFORE OR AFTER THE REMOVAL OF THE STREAM DIVERSION. IF THE PLACEMENT OCCURS AFTER STREAM DIVERSION REMOVAL, USE A TURBIDITY CURTAIN TO MINIMIZE IN-STREAM SEDIMENTATION. PAYMENT WILL BE INCIDENTAL TO ITEM #909005 - STREAM DIVERSION.

6. PLANTING GUIDANCE, WORK DONE BY DELDOT:

PLANTING GUIDANCE (INFORMATION ONLY, WORK TO BE DONE BY OTHERS. THERE WILL BE NO PAYMENT FOR PLANTING ON THIS CONTRACT.) UPON FINAL ACCEPTANCE OF THE CONTRACT, NOTIFY THE ENVIRONMENTAL STUDIES SECTION (302-760-2259 OR DOT_ENVIRONMENTALSTUDIES@DELAWARE.GOV) AND ROADSIDE ENVIRONMENTAL (DARIN CALLAWAY, 302-760-2186) OF COMPLETION. PLANT APPROPRIATE TREES AND/OR SHRUBS IN A NATURALIZED PATTERN (MINIMUM 8' MAXIMUM 12' CENTERS) IN TEMPORARILY DISTURBED WOODED WETLAND AREAS WITHIN THE LOC. FINAL PLANT COUNTS WILL BE BASED ON FIELD CONDITIONS AND DETERMINED BY THE ROADSIDE ENVIRONMENTAL ADMINISTRATOR OR APPOINTED DESIGNEE. SPECIFIC PLANT SELECTION IS ALSO AT THEIR DISCRETION BUT MUST BE A NATIVE SPECIES APPROVED BY THE DELAWARE DEPARTMENT OF NATURAL RESOURCES.

7. BOG TURTLE PROTECTION (BR 1-525 ONLY):

A. HIBERNATION SEASON GUIDANCE (NOVEMBER 15 - FEBRUARY 28/29)

1. CONDUCT ANY WORK THAT IS FEASIBLE TO DO DURING THIS TIME PERIOD, AS WORK DURING THIS TIME WILL HAVE THE LEAST IMPACT TO BOG TURTLES.
2. QUALIFIED BOG TURTLE SURVEYOR (OBTS) SHOULD BE PRESENT WHENEVER ANY DISTURBANCES OCCUR WITHIN STREAM/WETLAND HABITAT, INCLUDING, BUT NOT LIMITED TO, CULVERT REMOVAL AND EXCAVATION OF SOILS.
3. THE OBTS WILL CHECK ALL AREAS WITHIN THE LOC WHERE TURTLES MIGHT HIBERNATE (I.E. UNDER STREAM BANKS, AMONG TREE ROOTS, IN TUNNELS/SPRINGS WITH MOVING WATER) PRIOR TO WORK BEGINNING WITHIN STREAM/WETLAND HABITAT AND AFTER HEAVY EQUIPMENT IS USED THAT CAUSES GROUND VIBRATIONS OR CHANGES IN WATER LEVELS (I.N. AFTER A COFFERDAM IS COMPLETED, WHEN HEAVY EQUIPMENT IS DELIVERING SOIL OR ROCKS, WHEN JACKHAMMERS ARE USED, ETC.)

B. ACTIVE SEASON GUIDANCE (MARCH 1 - NOVEMBER 14)

1. A SILT FENCE WILL BE INSTALLED AROUND THE LOC PRIOR TO HEAVY EQUIPMENT LEAVING THE ROAD SURFACE. THE SILT FENCE WILL BE INSTALLED BY HAND WITH THE BOTTOM EDGE FLARED AWAY FROM THE LOC AND SECURED WITH SAND BAGS PLACED OUTSIDE THE LOC , TO PREVENT TURTLE MOVEMENT UNDER THE FENCE. NO TRENCHING SHOULD OCCUR THROUGH POTENTIAL BOG TURTLE HABITAT. THE SILT FENCE SHOULD BE TIED INTO EXISTING OR TEMPORARY STRUCTURES (E.G. ROAD EDGE, CONCRETE BARRIERS, COFFERDAMS); OPEN ENDS SHOULD BE CURLED AWAY FROM THE LOC. THE OBTS WILL ENSURE PROPER INSTALLMENT OF THE SILT FENCE REGARDING EFFECTIVENESS AS A TURTLE BARRIER. FOR SILT FENCE INSTALLED ACROSS MUCHY SOILS, THE OBTS WILL SEARCH FOR THE IDENTIFY SUBSURFACE TUNNELS THAT MAY PASS UNDERNEATH.
2. THE OBTS SHOULD BE PRESENT FROM INSTALLATION TO REMOVAL OF THE SILT FENCE WHENEVER WORK IS OCCURRING OFF THE ROAD SURFACE.
3. THE OBTS WILL CONDUCT A SEARCH OF THE LOC FOR BOG TURTLES PRIOR TO HEAVY EQUIPMENT MOVING INTO THE LOD. THIS WILL OCCUR THE MORNING OF EACH WORKDAY AND PRIOR TO RESUMING WORK AFTER LONG BREAKS. INCLUDES MUCKY SOILS, THIS MAY TAKE CONSIDERABLE TIME.
4. ANY MUCKY SOILS WITHIN THE LOC WILL BE THOROUGHLY SEARCHED BY MIDDLING BY THE OBTS. IF ANY SUBSURFACE TUNNELS ARE IDENTIFIED PASSING UNDER THE SILT FENCE, THE IMMEDIATE AREA OUTSIDE THE LOC SHOULD ALSO BE SEARCHED.
5. FOR IN-STREAM WORK, THE OBTS WILL NEED TO SURVEY ENTIRE STREAM BOTTOM AND UNDER-BANK AREAS AS BEST AS POSSIBLE.
6. THE OBTS WILL NEED TO CHECK SILT FENCES/BARRIERS (BOTH SIDES) MANY TIMES PER DAY TO ENSURE NO TURTLES ARE TRAPPED IN THE WORK ZONE.
7. THE OBTS WILL CLOSELY MONITOR EARTH-MOVING OPERATIONS FOR ANY TURTLES IN THE SOIL BEING MOVED.

C. THE FOLLOWING APPLIES TO BOTH SEASONS:

1. A QUALIFIED BOG TURTLE SURVEYOR (OBTS) SHALL BE EMPLOYED TO ENSURED TAKE DOES NOT OCCUR.
2. THE OBTS WILL HAVE THE AUTHORITY TO SIGNAL FOR AN IMMEDIATE TEMPORARY STOP TO EQUIPMENT OPERATION IF THERE ARE BOG TURTLES IN THE WORK AREA. THIS AUTHORITY AND THE OBTS' ROLE SHOULD BE COMMUNICATED TO WORK CREW DURING A SITE MEETING PRIOR TO WORK COMMENCING.
3. SOIL DISTURBANCE ADJACENT TO OR WITHIN WETLANDS SHOULD BE MINIMIZED TO MAINTAIN THE NATIVE PLANT COMMUNITY AND MINIMIZE ESTABLISHMENT ACTIVITIES THAT COULD INFLUENCE LONG TERM WETLAND GYDROLOGY (EITHER DRAINING OR PONDING WATER) SHOULD BE AVOIDED. ANY EXCAVATED OR DISTURBED AREAS ADJACENT TO THE WETLANDS SHOULD BE RESTORED TO THEIR ORIGINAL CONDITION (GRADED AND SEEDED) TO PREVENT SEDIMENTATION FROM OCCURRING IN WETLANDS.

- D. IF THE ABOVE GUIDLINES ARE FOLLOWED AND TAKE STILL OCCURS, AN INCIDENT REPORT SHOULD BE PREPARED BY THE OBTS AND NATE NAZDROWICZ SHOULD BE NOTIFIED IMMEDIATELY AT 302-735-8688 OR NATHAN.NAZDROWICZ@DELAWARE.GOV

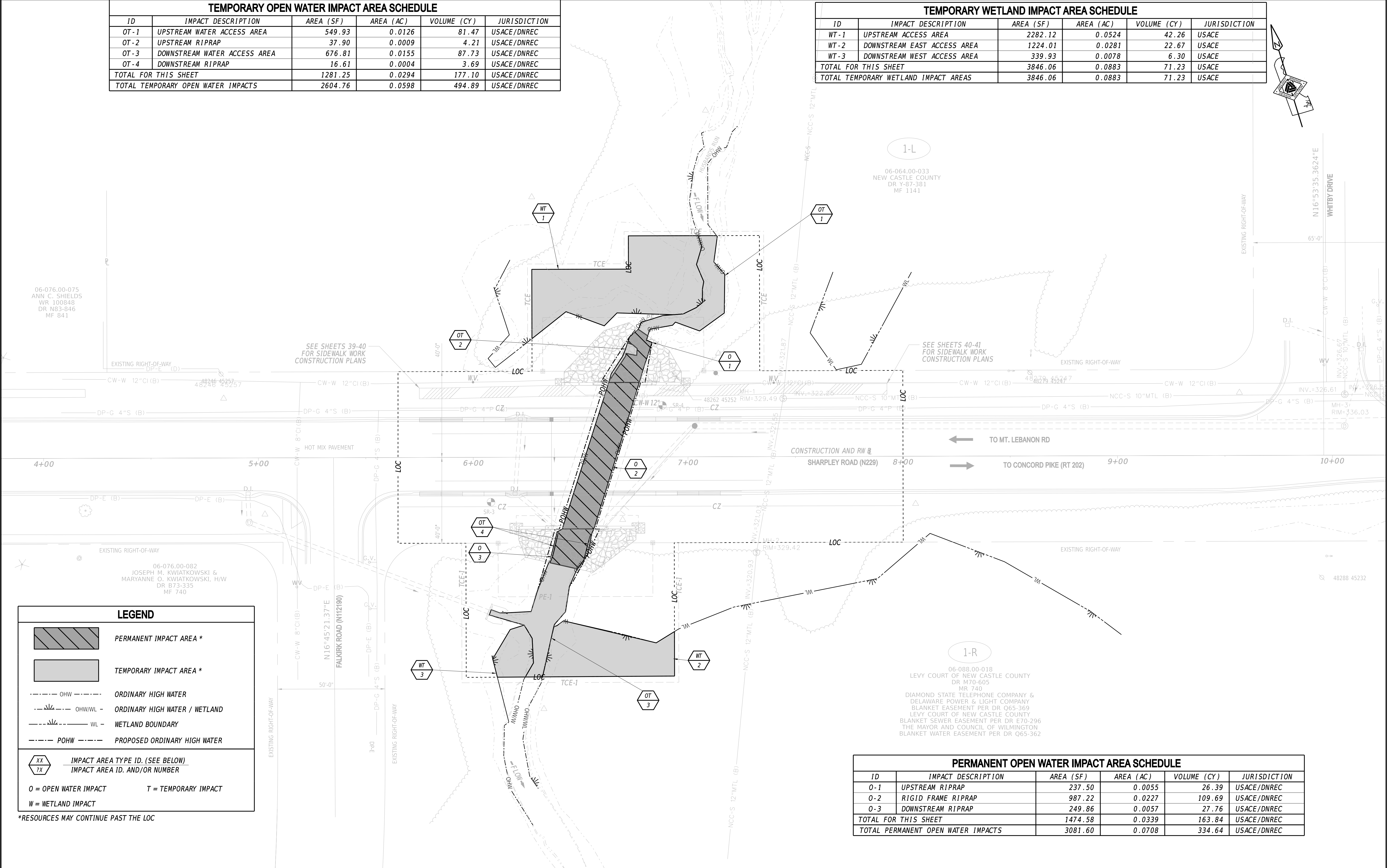
WETLANDS DELINEATED BY CHRISTIE BONNIWELL ON 08/2/2017 IN ACCORDANCE WITH THE US ARMY CORPS OF ENGINEERS "CORPS OF ENGINEERS WETLAND DELINEATION MANUAL (1987)".

ORIGINAL SHEET PREPARED BY MICHAEL HADDAD ON 07-13-2018. SHEET LAST UPDATED ON 09-01-2020.

ADDENDA / REVISIONS		NO SCALE NOTED	BR 1-022 AND 1-525 ON SHARPLEY ROAD	CONTRACT	BRIDGE NO.	1-022 & 1-525	ENVIRONMENTAL COMPLIANCE NOTES
				T201807103	DESIGNED BY: MAH		
				COUNTY	CHECKED BY: JAT		
				NEW CASTLE			

TEMPORARY OPEN WATER IMPACT AREA SCHEDULE					
ID	IMPACT DESCRIPTION	AREA (SF)	AREA (AC)	VOLUME (CY)	JURISDICTION
OT-1	UPSTREAM WATER ACCESS AREA	549.93	0.0126	81.47	USACE/DNREC
OT-2	UPSTREAM RIPRAP	37.90	0.0009	4.21	USACE/DNREC
OT-3	DOWNSTREAM WATER ACCESS AREA	676.81	0.0155	87.73	USACE/DNREC
OT-4	DOWNSTREAM RIPRAP	16.61	0.0004	3.69	USACE/DNREC
TOTAL FOR THIS SHEET		1281.25	0.0294	177.10	USACE/DNREC
TOTAL TEMPORARY OPEN WATER IMPACTS		2604.76	0.0598	494.89	USACE/DNREC

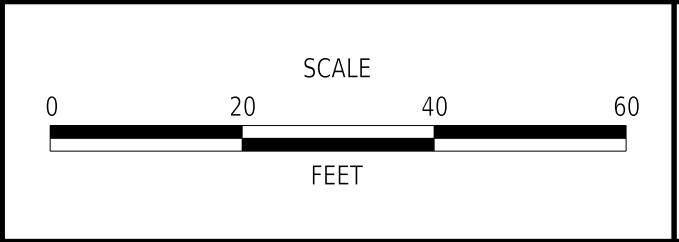
TEMPORARY WETLAND IMPACT AREA SCHEDULE					
ID	IMPACT DESCRIPTION	AREA (SF)	AREA (AC)	VOLUME (CY)	JURISDICTION
WT-1	UPSTREAM ACCESS AREA	2282.12	0.0524	42.26	USACE
WT-2	DOWNSTREAM EAST ACCESS AREA	1224.01	0.0281	22.67	USACE
WT-3	DOWNSTREAM WEST ACCESS AREA	339.93	0.0078	6.30	USACE
TOTAL FOR THIS SHEET		3846.06	0.0883	71.23	USACE
TOTAL TEMPORARY WETLAND IMPACT AREAS		3846.06	0.0883	71.23	USACE



*RESOURCES MAY CONTINUE PAST THE LOC

PERMANENT OPEN WATER IMPACT AREA SCHEDULE					
ID	IMPACT DESCRIPTION	AREA (SF)	AREA (AC)	VOLUME (CY)	JURISDICTION
O-1	UPSTREAM RIPRAP	237.50	0.0055	26.39	USACE/DNREC
O-2	RIGID FRAME RIPRAP	987.22	0.0227	109.69	USACE/DNREC
O-3	DOWNSTREAM RIPRAP	249.86	0.0057	27.76	USACE/DNREC
TOTAL FOR THIS SHEET		1474.58	0.0339	163.84	USACE/DNREC
TOTAL PERMANENT OPEN WATER IMPACTS		3081.60	0.0708	334.64	USACE/DNREC

ADDENDA / REVISIONS	



BR 1-022 AND 1-525 ON SHARPLEY ROAD	
-------------------------------------	--

CONTRACT	BRIDGE NO.	1-525
T201807103	DESIGNED BY:	MAH
COUNTY	CHECKED BY:	JAT
NEW CASTLE		

ENVIRONMENTAL COMPLIANCE PLAN	
SECTION	BR
SHEET NO.	25

EROSION AND SEDIMENT CONTROL PLAN

1.

THE SEDIMENT AND STORMWATER MANAGEMENT PLANS HAVE BEEN APPROVED BY DELDOT'S STORMWATER ENGINEER UNDER DELDOT'S DELEGATED AUTHORITY. THE SEDIMENT AND STORMWATER MANAGEMENT PLANS ARE VALID FOR A FIVE YEAR PERIOD, BEGINNING ON THE DATE THE STORMWATER ENGINEER SIGNED THIS SHEET. IF THE FINAL ACCEPTANCE OF THE PROJECT IS ANTICIPATED TO EXTEND BEYOND THE FIVE YEARS, THE CONTRACTOR WILL INFORM THE ENGINEER THREE MONTHS PRIOR TO THE EXPIRATION OF THE APPROVED SEDIMENT AND STORMWATER MANAGEMENT PLANS. THE STORMWATER ENGINEER WILL REVIEW THE CURRENT SEDIMENT AND STORMWATER MANAGEMENT PLAN AND ISSUE AN EXTENSION WITH ANY APPROPRIATE MODIFICATIONS.
2.

EROSION POTENTIAL FOR THIS PROJECT	CONTRACTOR EROSION AND SEDIMENT CONTROL SUPERVISOR REQUIREMENT
() INSIGNIFICANT	NONE
() MINOR	CONTRACTOR TRAINING PROGRAM, AS DEFINED IN SECTION 6.2 OF THE DELAWARE SEDIMENT AND STORMWATER REGULATIONS.
(X) MAJOR	CERTIFIED CONSTRUCTION REVIEWER (CCR), AS DEFINED IN SECTION 6.3 OF THE DELAWARE SEDIMENT AND STORMWATER REGULATONS.
3.

A.

THE DISTURBED AREA FOR 1-525 IS 0.8399 ACRES.

B.

THE DISTURBED AREA FOR 1-022 IS 0.6982 ACRES.

C.

THE DISTURBED AREA FOR SIDEWALK IS 0.2900 ACRES.
4.

A.

THE ADDITIONAL IMPERVIOUS AREA FOR 1-525 IS 0.00 SQUARE FEET.

B.

THE ADDITIONAL IMPERVIOUS AREA FOR 1-022 IS 265.60 SQUARE FEET.

C.

THE ADDITIONAL IMPERVIOUS AREA FOR SIDEWALK IS 3,391 SQUARE FEET.

MAINTENANCE OF TRAFFIC NOTES

5.

AMERICAN TRAFFIC SAFETY SERVICES ASSOCIATION (ATSSA) CERTIFIED TRAFFIC CONTROL SUPERVISOR REQUIREMENT FOR THIS PROJECT.

(X)	THE CONTRACTOR SHALL NOT BE REQUIRED TO HAVE AN ATSSA SUPERVISOR ASSIGNED TO THIS PROJECT.
()	THE CONTRACTOR SHALL HAVE AN ATSSA SUPERVISOR ASSIGNED TO THIS PROJECT. THE CONTRACTOR'S GENERAL SUPERINTENDENT FOR THIS PROJECT OR ANOTHER ATSSA CERTIFIED MEMBER OF THE CONTRACTOR'S PROJECT STAFF MAY BE THE ATSSA SUPERVISOR. PAYMENT FOR ATSSA SUPERVISOR IS INCIDENTAL TO ITEM 801000.

6.

ALL NECESSARY SIGNS, PAVEMENT MARKINGS AND ROADSIDE APPURTENANCES SHALL BE INSTALLED PRIOR TO THE OPENING/REOPENING OF A ROADWAY OR RAMP. A WALKTHROUGH WITH THE ENGINEER, TRAFFIC SAFETY, TRAFFIC CONSTRUCTION AND OTHER PERSONNEL SHALL OCCUR NO LESS THAN 48 HOURS PRIOR TO THE OPENING/REOPENING OF ANY ROAD OR RAMP.
7.

THE CONTRACTOR IS PROHIBITED FROM SHUTTING DOWN OR BEGINNING WORK ON THE SECOND BRIDGE UNTIL THE FIRST BRIDGE IS COMPLETED AND OPEN TO TRAFFIC.

SEQUENCE OF CONSTRUCTION

1.

INSTALL MOT DEVICES IN ACCORDANCE WITH THE DETOUR PLAN FOR BR 1-525.
2.

UTILITY WORK FOR BR 1-525 TO BE COMPLETED BY:

A. VERIZON: RELOCATE AERIALS AND DESIGNATED UTILITY POLE.

B. COMCAST: REATTACH AERIALS TO VERIZON'S NEW POLE.

C. DP&L: REATTACH AERIALS TO VERIZON'S NEW POLE.
3.

INSTALL E&S DEVICES AND STREAM DIVERSION IN ACCORDANCE WITH THE APPROVED PLAN FOR BR 1-525.
4.

WORK FOR BR 1-525 TO BE COMPLETED BY DELMARVA POWER:

A. INSTALL 4" VALVES, CAP PIPE AND ABANDON 4" STEEL PIPE OVER BR 1-525.
5.

REMOVE EXISTING STRUCTURES FOR BR 1-525.
6.

RELOCATE EXISTING CITY OF WILMINGTON WATER LINE PER THE RELOCATION PLANS FOR BR 1-525. FINAL TIE-IN OF RELOCATED MAIN TO EXISTING MAIN MUST BE PERFORMED AT NIGHT.
7.

WORK FOR BR 1-525 TO BE COMPLETED BY DP&L:

A. DE-ENERGIZE AERIALS DURING CRANE WORK BY CONTRACTOR.
8.

INSTALL PROPOSED PRECAST STRUCTURES, AND DRAINAGE PIPES AND STRUCTURES FOR BR 1-525.
9.

WORK FOR BR 1-525 TO BE COMPLETED BY DELMARVA POWER:

A. INSTALL 8" STEEL CASING, INSTALL 4" POLY CARRIER PIPE AND RECONNECT ENDS TO 4" VALVES.
10.

WORK FOR BR 1-525 TO BE COMPLETED BY DP&L:

A. RE-ENERGIZE AERIALS.
11.

COMPLETE ALL REMAINING PROPOSED WORK FOR BR 1-525.
12.

COMPLETE CLEARING FOR POLE RELOCATION FOR BR 1-022.

A. COORDINATE WITH UTILITY COMPANIES PERFORMING THE RELOCATION.

B. DO NOT GRUB BEFORE E&S DEVICES ARE INSTALLED AT THIS LOCATION.

C. MAY COMPLETE AT ANY TIME PRIOR TO STEP 12.
13.

UTILITY WORK FOR BR 1-022 TO BE COMPLETED BY:

A. VERIZON: RELOCATE AERIALS AND DESIGNATED UTILITY POLES.

B. COMCAST: RELOCATE AERIALS TO VERIZON'S NEW POLES.

C. DP&L: INSTALL GUY WIRES, GUY WIRE POLES, AND RELOCATE AERIALS TO VERIZON'S NEW POLES.
14.

REMOVE TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES AFTER VEGETATION HAS STABILIZED ALL DISTURBED AREAS IN ACCORDANCE WITH THE APPROVED PLAN AND AS DIRECTED BY THE ENGINEER FOR BR 1-525.
15.

REMOVE ALL MOT DEVICES AND REOPEN THE ROADWAY FOR BR 1-525. REMOVAL OF MOT DEVICES MAY OCCUR PRIOR TO REMOVAL OF TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES.
16.

INSTALL MOT DEVICES IN ACCORDANCE WITH THE DETOUR PLAN FOR BR 1-022.
17.

INSTALL E&S DEVICES AND STREAM DIVERSION IN ACCORDANCE WITH THE APPROVED PLAN FOR BR 1-022.
18.

WORK FOR BR 1-022 TO BE COMPLETED BY DELMARVA POWER

A. INSTALL 4" VALVES, CAP PIPE AND ABANDON 4" STEEL PIPE OVER BR 1-022.
19.

REMOVE EXISTING STRUCTURES FOR BR 1-022.
20.

RELOCATE EXISTING CITY OF WILMINGTON WATER LINE PER THE RELOCATION PLANS FOR BR 1-022. FINAL TIE-IN OF RELOCATED MAIN TO EXISTING MAIN MUST BE PERFORMED AT NIGHT. VALVE AT THE INTERSECTION OF CRANEBROOK RD. & SHARPLEY RD. MUST BE RESTRAINED DURING TIE-IN.
21.

INSTALL PROPOSED PRECAST STRUCTURES, AND DRAINAGE PIPES AND STRUCTURES FOR BR 1-022.
22.

WORK TO BE COMPLETED BY DELMARVA POWER FOR BR 1-022:

A. INSTAL 8" STEEL CASING, INSTALL 4" POLY CARRIER PIPE AND RECONNECT ENDS TO 4" VALVES.
23.

COMPLETE ALL REMAINING PROPOSED WORK FOR BR 1-022.
24.

REMOVE TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES AFTER VEGETATION HAS STABILIZED ALL DISTURBED AREAS IN ACCORDANCE WITH THE APPROVED PLAN AND AS DIRECTED BY THE ENGINEER FOR BR 1-022.
25.

REMOVE ALL MOT DEVICES AND REOPEN THE ROADWAY FOR BR 1-022. REMOVAL OF MOT DEVICES MAY OCCUR PRIOR TO REMOVAL OF TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES.

EARTHWORK SUMMARY (SIDEWALK)	
EXCAVATION	
EXCAVATION FROM CROSS SECTIONS	27 C.Y.
ROCK EXCAVATION FOR ROADWAY AND TRENCHES	0 C.Y.
TOPSOIL STRIPPING	88 C.Y.
TOTAL EXCAVATION	203 C.Y.
EXCAVATION AVAILABLE FOR EMBANKMENT	
EXCAVATION MEETING BORROW TYPE 'A'	0 C.Y.
EXCAVATION MEETING BORROW TYPE 'F'	0 C.Y.
EXCAVATION MEETING TOPSOIL	203 C.Y.
EMBANKMENT REQUIREMENTS	
BORROW TYPE 'A' REQUIRED (INCLUDING UNDERCUT)	0 C.Y.
BORROW TYPE 'F' REQUIRED	0 C.Y.
TOPSOIL REQUIRED	3 C.Y.
MATERIAL BALANCE ("+"= EXCESS, "-"= NEED)	
BORROW TYPE 'A'	0 C.Y.
BORROW TYPE 'F'	0 C.Y.
TOPSOIL	+200 C.Y.
UNSUITABLE MATERIAL	+78 C.Y.
NOTES: <div>1) THE VALUES LISTED IN THE EARTHWORK SUMMARY ARE APPROXIMATE AND ARE NOT TO BE USED AS A BASIS OF PAYMENT. THE EARTHWORK SUMMARY IS CONSIDERED FOR INFORMATIONAL PURPOSES ONLY.</div> <div>2) OTHER SOURCES OF EXCAVATION MAY INCLUDE PIPE TRENCH EXCAVATION, STRUCTURE EXCAVATION, UNDERCUT EXCAVATION, STORMWATER MANAGEMENT POND EXCAVATION, ENVIRONMENTAL SITE EXCAVATION, MAINTENANCE OF TRAFFIC EXCAVATION, ETC.</div> <div>3) UNSUITABLE MATERIALS INCLUDE UNDERCUT SOILS, BITUMINOUS PAVEMENT, ETC.</div>	

ADDENDA / REVISIONS		SCALE NOT NOTED	BR 1-022 AND 1-525 ON SHARPLEY ROAD	CONTRACT	BRIDGE NO.	1-022 & 1-525	CONSTRUCTION SEQUENCE, MOT, AND EROSION CONTROL NOTES	SECTION
				T201807103	DESIGNED BY: MAH			BR
				COUNTY				SHEET NO.
				NEW CASTLE	CHECKED BY: JAT	27		

PORTABLE CHANGEABLE MESSAGE SIGNS

PRIOR TO DETOUR
(10 DAYS PRIOR TO BEGINNING OF DETOUR)

PCMS-1

SHARPLEY ROAD TO CLOSE

STARTING XXXX/XX

DURING DETOUR
(DISPLAY FOR 5 DAYS AFTER IMPLEMENTATION OF DETOUR)

PCMS-2

SHARPLEY ROAD CLOSED

FOLLOW DETOUR

SPECIAL SIGNS

ROAD CLOSED 3/4 MILES AHEAD
LOCAL TRAFFIC ONLY

W20-3a

ROAD CLOSED 0.4 MILES AHEAD
LOCAL TRAFFIC ONLY

W20-3b

Sharpplay Rd CLOSED AT
Whitby Dr

6" 6" 6" 6" 6" 6"

FOLLOW DETOUR

48"

50"

Sharpplay Rd CLOSED AT
Falkirk Rd

6" 6" 6" 6" 6" 6"

FOLLOW DETOUR

48"

51"

SPECIAL SIGNS TO BE RETROREFLECTIVE
ORANGE BACKGROUND WITH BLACK LEGEND

PREPARED BY
DELDOT - TRANSPORTATION SOLUTIONS
TRAFFIC SAFETY

MARK S. BUCKALEW

No. 16738

DELAWARE

PROFESSIONAL ENGINEER

2/22/19

DATE

SEAL

ADDENDA / REVISIONS

NOT TO SCALE

BR 1-022 AND 1-525 ON N229
SHARPLEY ROAD OVER
WILLOW RUN AND HUSBANDS RUN

CONTRACT
T201807103

COUNTY
NC

PERMIT NO.
X

DESIGNED BY: EM

CHECKED BY: MB

VEHICULAR DETOUR PLAN
SHARPLEY ROAD (BR 1-525)

SECTION
15

SHEET NO.
28

LEGEND

A

DETOUR

M4-9-DE

B

DETOUR

M4-9

C

DETOUR

M4-9

D

DETOUR

M4-9

E

DETOUR

M4-9

F

DETOUR

M4-9

G

DETOUR

M4-9

H

DETOUR

M4-9

I

DETOUR

M4-9

J

END DETOUR

M4-8a

K

DETOUR AHEAD

W20-2

L

DETOUR 1000 FT

W20-2

M

DETOUR 500 FT

W20-2

N

ROAD CLOSED AHEAD

W20-3

O

ROAD CLOSED 1000 FT

W20-3

P

ROAD CLOSED 500 FT

W20-3

Q

ROAD CLOSED

R11-2

R

DETOUR

M4-10(L)

S

DETOUR

M4-10(R)

T

ROAD CLOSED XX MILES AHEAD
LOCAL TRAFFIC ONLY

R11-3a

U

BRIDGE OUT XX MILES AHEAD
LOCAL TRAFFIC ONLY

R11-3b

V

ROAD CLOSED TO
THRU TRAFFIC

R11-4

W

X

GENERAL NOTES

1. ALL DETOUR SIGNING, INCLUDING TRAILBLAZERS, ARE TO BE SUPPLIED AND MAINTAINED BY THE GENERAL CONTRACTOR IN COMPLIANCE WITH "THE DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (DE MUTCD.)

2. THE CONTRACTOR SHALL COMPLY WITH GUIDELINES IN "THE DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (DE MUTCD PART 6) OR BARRICADES AND SIGNS (AS PER LATEST REVISION.)

3. DESIGN OF ALL SIGNS SHALL BE IN ACCORDANCE WITH THE FHWA STANDARD HIGHWAY SIGNS BOOK.

4. SIZES OF ALL SIGNS SHALL BE IN ACCORDANCE WITH "THE DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (DE MUTCD.) SIZE OF SIGN SHALL BE BASED ON TYPE OF ROADWAY ON WHICH THE SIGN IS INSTALLED.

5. SIGNS NO LONGER IN USE SHALL BE COMPLETELY COVERED WITH NO RETROREFLECTIVE MATERIAL SHOWING, OR SHALL BE REMOVED, AS DIRECTED BY THE ENGINEER.

6. FIELD CONDITIONS MAY DICTATE CHANGES AT SOME TIME DURING THE LIFE OF THE CONTRACT. IN THE EVENT OF OMISSIONS OR CORRECTIONS, THE SIGNING PROVISIONS OF "THE DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (DE MUTCD) WILL PREVAIL.

7. SIGNS "N" THROUGH "O" AND "T" AND "V". THE WORD "ROAD" SHOULD BE CHANGED TO "RAMP", "RR XING", OR "BRIDGE" WHERE APPLICABLE.

8. WARNING SIGNS AND DETOUR TRAILBLAZERS SHALL BE MOUNTED ON BREAKAWAY POSTS AND HAVE RETROREFLECTIVE FLUORESCENT ORANGE SHEETING.

9. "W" BARRICADES SHALL COMPLETELY RUN THE FULL WIDTH OF THE ROADWAY.

10. BARRICADES SHALL BE A MINIMUM OF 6 FEET WIDE UNLESS DIRECTED BY THE ENGINEER.

CONCURRENCE FOR IMPLEMENTATION

Emilia Monda

2/20/19

DATE

PORTABLE CHANGEABLE MESSAGE SIGNS

PRIOR TO DETOUR
(10 DAYS PRIOR TO BEGINNING OF DETOUR)

PCMS-1

SHARPLEY ROAD TO CLOSE

STARTING
XXXXXX

DURING DETOUR
(DISPLAY FOR 5 DAYS AFTER IMPLEMENTATION OF DETOUR)

PCMS-2

SHARPLEY ROAD CLOSED

FOLLOW
DETOUR

SPECIAL SIGNS

T1

ROAD CLOSED
1000 FT AHEAD
LOCAL TRAFFIC ONLY
R11-3a

T2

ROAD CLOSED
3/4 MILES AHEAD
LOCAL TRAFFIC ONLY
R11-3a

Y

Sharpley Rd
CLOSED AT
Cranebrook Dr
FOLLOW
DETOUR
6" 6" 6" 6" 6" 6"

Z

Sharpley Rd
CLOSED AT
Amberley Rd
FOLLOW
DETOUR
6" 6" 6" 6" 6" 6"

SPECIAL SIGNS TO BE D/B RETROREFLECTIVE
ORANGE BACKGROUND WITH BLACK LEGEND

PREPARED BY
DELDOT - TRANSPORTATION SOLUTIONS
TRAFFIC SAFETY

MLR

2-22-19

DATE

NO. 16738

DELAWARE

PROFESSIONAL ENGINEER

SEAL

THIS SEAL APPLIES TO ALL SHEETS
BEARING THE "TS" SECTION DESIGNATION.

ADDENDA / REVISIONS

LEGEND

A

DETOUR
N4-9-DE

B

DETOUR
N4-9

C

DETOUR
N4-9

D

DETOUR
N4-9

E

DETOUR
N4-9

F

DETOUR
N4-9

G

DETOUR
N4-9

H

DETOUR
N4-9

I

DETOUR
N4-9

J

END
DETOUR
N4-8a

K

DETOUR
AHEAD
W20-2

L

DETOUR
1000 FT
W20-2

M

DETOUR
500 FT
W20-2

N

ROAD
CLOSED
AHEAD
W20-3

O

ROAD
CLOSED
1000 FT
W20-3

P

ROAD
CLOSED
500 FT
W20-3

Q

ROAD
CLOSED
R11-2

R

DETOUR
N4-10(L)

S

DETOUR
N4-10(R)

T

ROAD CLOSED
XX MILES AHEAD
LOCAL TRAFFIC ONLY
R11-3a

U

BRIDGE OUT
XX MILES AHEAD
LOCAL TRAFFIC ONLY
R11-3b

V

ROAD CLOSED
TO
THRU TRAFFIC
R11-4

W

X

GENERAL NOTES

1. ALL DETOUR SIGNING, INCLUDING TRAILBLAZERS, ARE TO BE SUPPLIED AND MAINTAINED BY THE GENERAL CONTRACTOR IN COMPLIANCE WITH THE DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (DE MUTCD).

2. THE CONTRACTOR SHALL COMPLY WITH GUIDELINES IN THE DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (DE MUTCD PART 6) OR BARRICADES AND SIGNS (AS PER LATEST REVISION).

3. DESIGN OF ALL SIGNS SHALL BE IN ACCORDANCE WITH THE FHWA STANDARD HIGHWAY SIGNS BOOK.

4. SIZES OF ALL SIGNS SHALL BE IN ACCORDANCE WITH THE DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (DE MUTCD). SIZE OF SIGN SHALL BE BASED ON TYPE OF ROADWAY ON WHICH THE SIGN IS INSTALLED.

5. SIGNS NO LONGER IN USE SHALL BE COMPLETELY COVERED WITH NO RETROREFLECTIVE MATERIAL SHOWING, OR SHALL BE REMOVED, AS DIRECTED BY THE ENGINEER.

6. FIELD CONDITIONS MAY DICTATE CHANGES AT SOME TIME DURING THE LIFE OF THE CONTRACT. IN THE EVENT OF OMISSIONS OR CORRECTIONS, THE SIGNING PROVISIONS OF THE DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (DE MUTCD) WILL PREVAIL.

7. SIGNS "N" THROUGH "Q" AND "T" AND "V", THE WORD "ROAD" SHOULD BE CHANGED TO "RAMP", "RR XING", OR "BRIDGE" WHERE APPLICABLE.

8. WARNING SIGNS AND DETOUR TRAILBLAZERS SHALL BE MOUNTED ON BREAKAWAY POSTS AND HAVE RETROREFLECTIVE FLUORESCENT ORANGE SHEETING.

9. "W" BARRICADES SHALL COMPLETELY RUN THE FULL WIDTH OF THE ROADWAY.

10. BARRICADES SHALL BE A MINIMUM OF 6 FEET WIDE UNLESS DIRECTED BY THE ENGINEER.

CONCURRENCE FOR IMPLEMENTATION

Emily M. Moran

2/20/19

DATE

CONTRACT
T201807103

PERMIT NO.
X

COUNTY
NC

DESIGNED BY: EM

CHECKED BY: MB

VEHICULAR DETOUR PLAN
SHARPLEY ROAD (BR 1-022)

SECTION
TS

SHEET NO.
29

SPECIAL SIGNS

SPECIAL NOTES

PREPARED BY
DELDOT - TRANSPORTATION SOLUTIONS
TRAFFIC SAFETY

2/19/20

DATE

THIS SEAL ONLY APPLIES TO THIS DETOUR SHEET

2/24/2020

DATE

QA/QC REVIEWER

2/24/2020

DATE

AT CERTIFY TO THE BEST OF MY KNOWLEDGE AND BELIEF THAT THIS DETOUR PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

JEFFREY VAN HORN

LICENSED

No. 17249

DELaware

PROFESSIONAL ENGINEER

9"

12"

A

9"

12"

B

9"

12"

C

9"

12"

D

9"

12"

E

9"

12"

F

PEDESTRIAN CROSSWALK

R9-8

G

SIDEWALK CLOSED
USE OTHER SIDE

R9-10

H

SIDEWALK CLOSED AHEAD
CROSS HERE

R9-11(L)

I

SIDEWALK CLOSED AHEAD
CROSS HERE

R9-11(R)

J

SIDEWALK CLOSED
CROSS HERE

R9-11a(L)

K

SIDEWALK CLOSED
CROSS HERE

R9-11a(R)

L

SIDEWALK CLOSED AHEAD

R9-9(MOD)

M

SIDEWALK CLOSED

R9-9

N

CROSSWALK CLOSED AHEAD

R9-9(MOD)

O

CROSSWALK CLOSED

R9-9(MOD)

P

Q

GENERAL NOTES

1. ALL TEMPORARY TRAFFIC CONTROL DEVICES ARE TO BE SUPPLIED AND MAINTAINED BY THE GENERAL CONTRACTOR AND SHALL BE IN COMPLIANCE WITH THIS PLAN AND THE DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (DE MUTCD) LATEST EDITION.

2. SIGNS "N" THROUGH "Q" AND "T" AND "V". THE WORD "ROAD" SHALL BE CHANGED TO "RAMP", "RR XING" OR "BRIDGE" WHERE APPLICABLE.

3. "W" TYPE 3 BARRICADES AT A ROAD CLOSURE SHALL BE PLACED COMPLETELY ACROSS THE ROADWAY, FROM CURB TO CURB, OR FROM EDGE OF ROAD TO EDGE OF ROAD, WITH THE STRIPES POSITIONED DOWNWARD TOWARD THE CENTER OF THE ROADWAY.

4. BARRICADES SHALL BE A MINIMUM OF 6 FEET WIDE UNLESS DIRECTED BY THE ENGINEER.

CONCURRENCE FOR IMPLEMENTATION

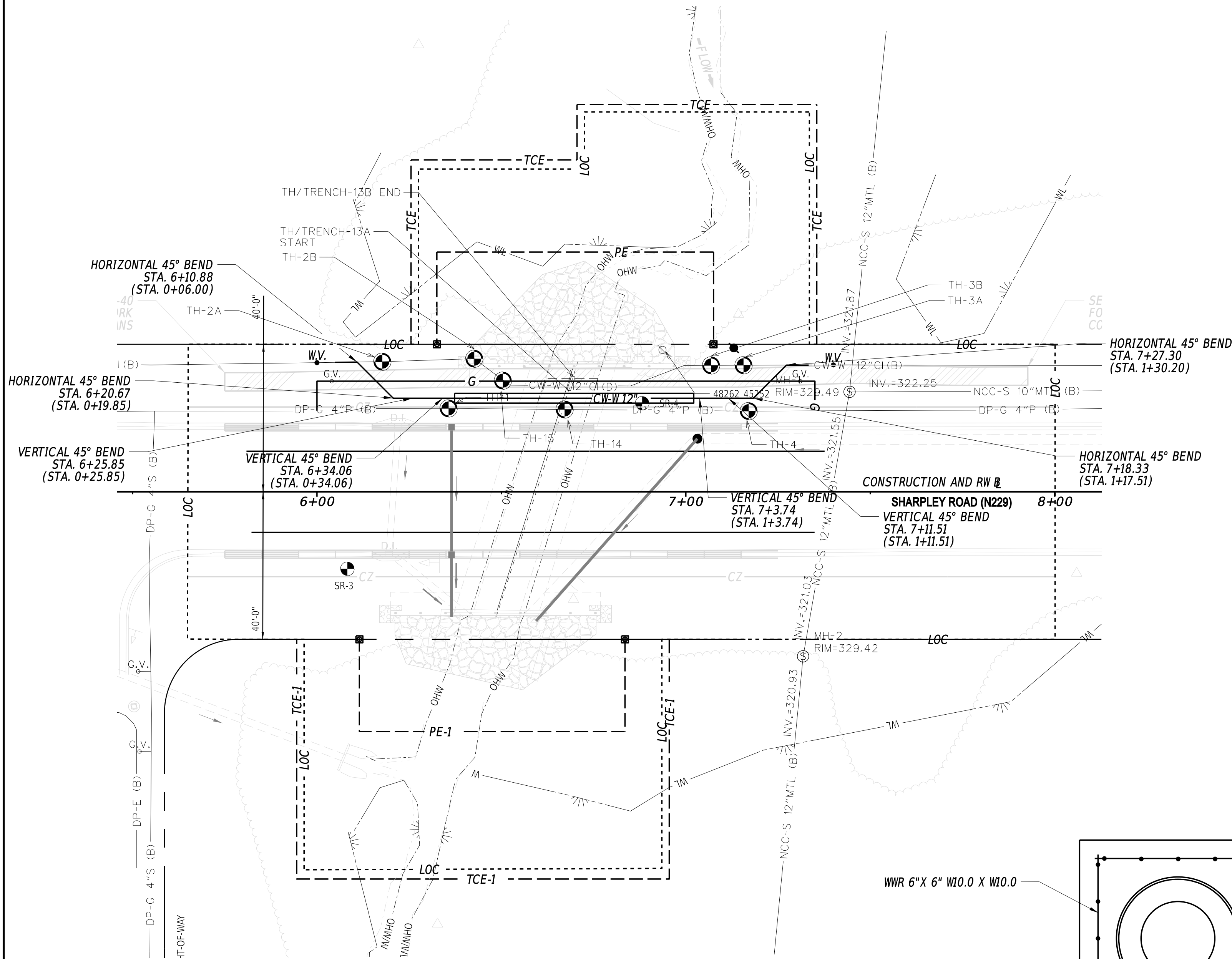
2-17-20

TRAFFIC SAFETY

DATE

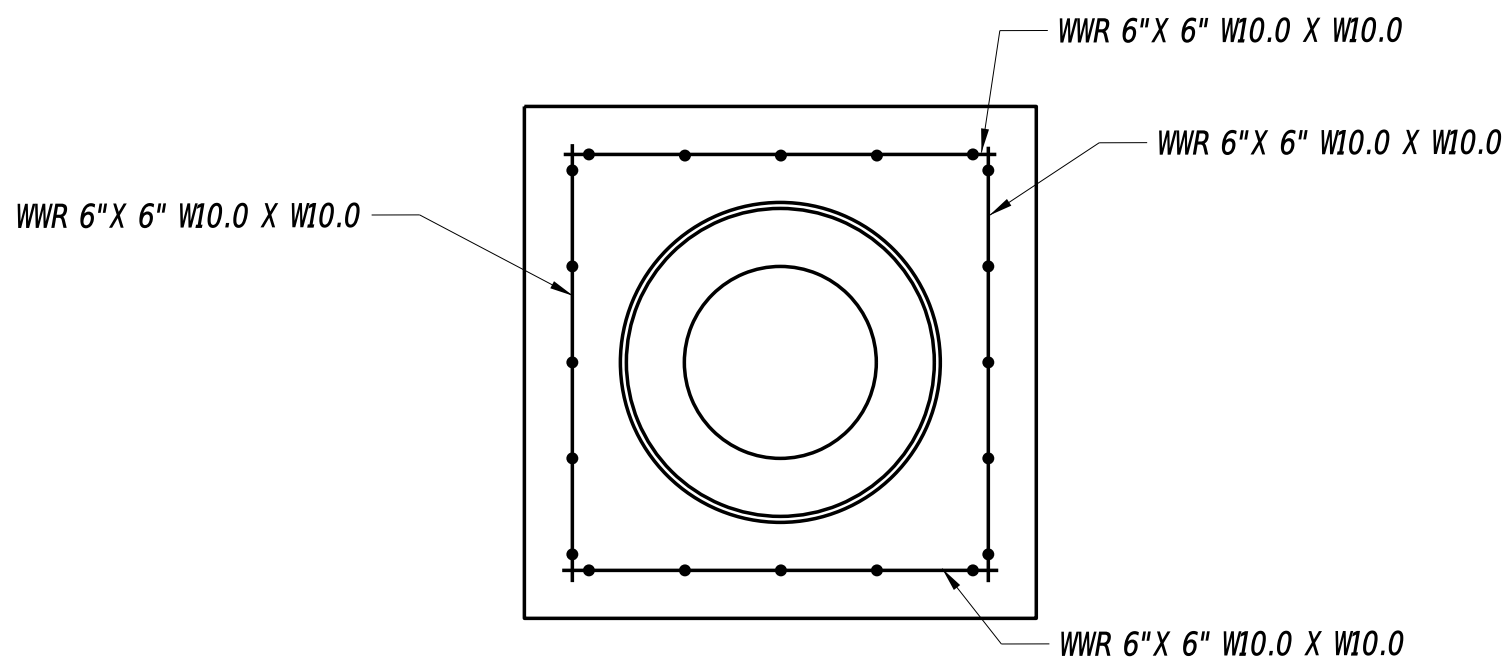
ADDENDA / REVISIONS		NOT TO SCALE	BR 1-022 AND 1-525 ON N229 SHARPLEY ROAD OVER WILLOW RUN AND HUSBANDS RUN	CONTRACT	PERMIT NO.	DETOUR PLAN PEDESTRIAN SHARPLEY ROAD	SECTION		
				T201807103	DESIGNED BY: DT		TS		
				COUNTY	CHECKED BY: GN		SHEET NO.		
				NEW CASTLE			30		

- NOTE:
1. THERE ARE EIGHT 45° BENDS IN THE PROPOSED CITY OF WILMINGTON WATER LINE. SEE PROFILE ON THIS SHEET FOR ELEVATIONS (TYP.)
 2. THRUST BLOCKS ARE REQUIRED UNDER EACH BEND AND FITTING. SEE CITY OF WILMINGTON DEPARTMENT OF PUBLIC WORKS WATER DISTRIBUTION SYSTEM STANDARD SPECIFICATIONS AND DETAILS FOR INFORMATION REGARDING THRUST BLOCKS.
 3. SUPPORT AND MAINTAIN THE EXISTING WATER MAIN UNTIL THE PROPOSED WATER MAIN IS INSTALLED, THEN REMOVE THE EXISTING WATER MAIN WHEN TIEING IN THE PROPOSED WATER MAIN. SUPPORTING AND MAINTAIN THE EXISTING WATER MAIN IS INCIDENTAL TO ITEM #211000.
 4. PROPOSED 12" INSERTION WATER VALVE AT STA. 6+00 OFFSET 35.0 FT LEFT AND STA. 7+40 OFFSET 34.5 FT LEFT TO BE PAID UNDER ITEM #710122 - GATE VALVES, 12".
 5. VALVE BOX AT STA. 6+00 OFFSET 35.0 FT LEFT AND STA. 7+40 OFFSET 34.5 FT LEFT TO BE PAID UNDER ITEM #710454 - VALVE BOX, 3 PC.



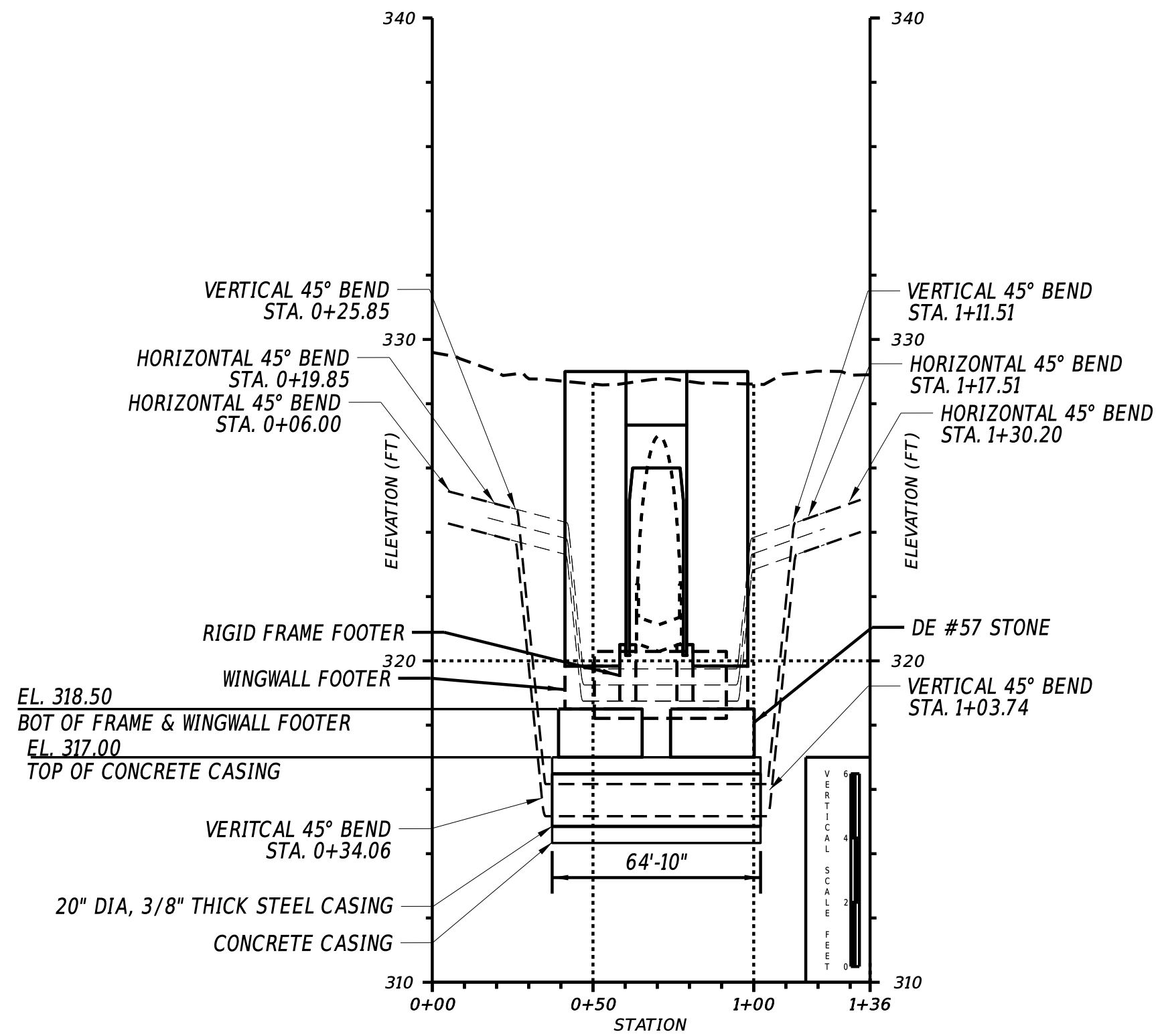
PLAN

1" = 1' - 0"



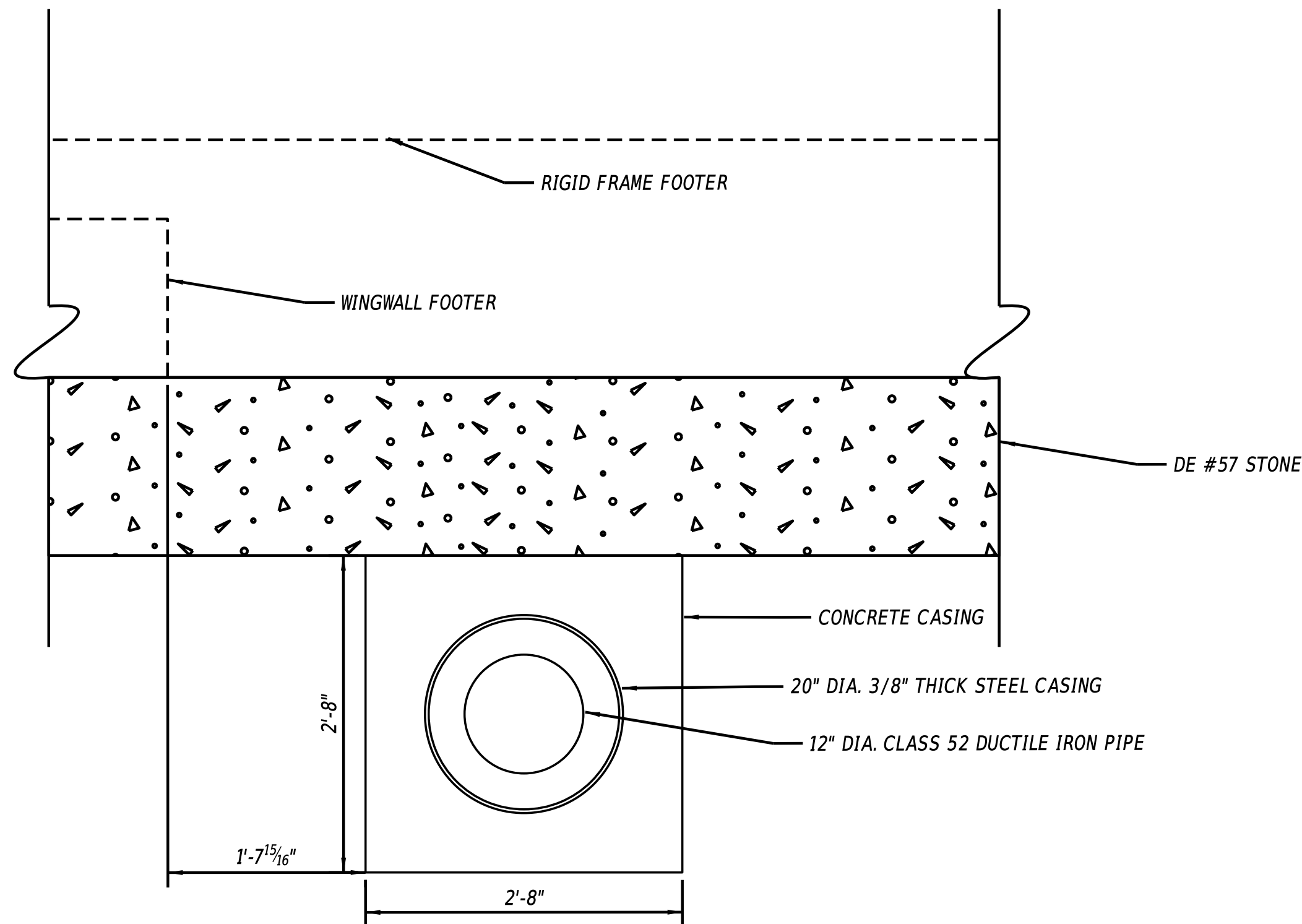
CITY OF WILMINGTON WATER LINE REBAR DETAIL

1" = 1' - 0"



CITY OF WILMINGTON WATER LINE PROFILE

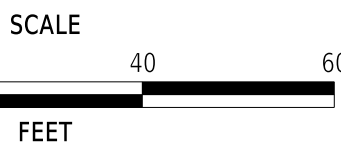
40" = 1' - 0"



CITY OF WILMINGTON WATER LINE SECTION

1" = 1' - 0"

ADDENDA / REVISIONS



BR 1-022 AND 1-525 ON
SHARPLEY ROAD

CONTRACT

T201807103

COUNTY

NEW CASTLE

BRIDGE NO.

1-525

DESIGNED BY: MAH

CHECKED BY: JAT

UTILITY RELOCATION PLAN

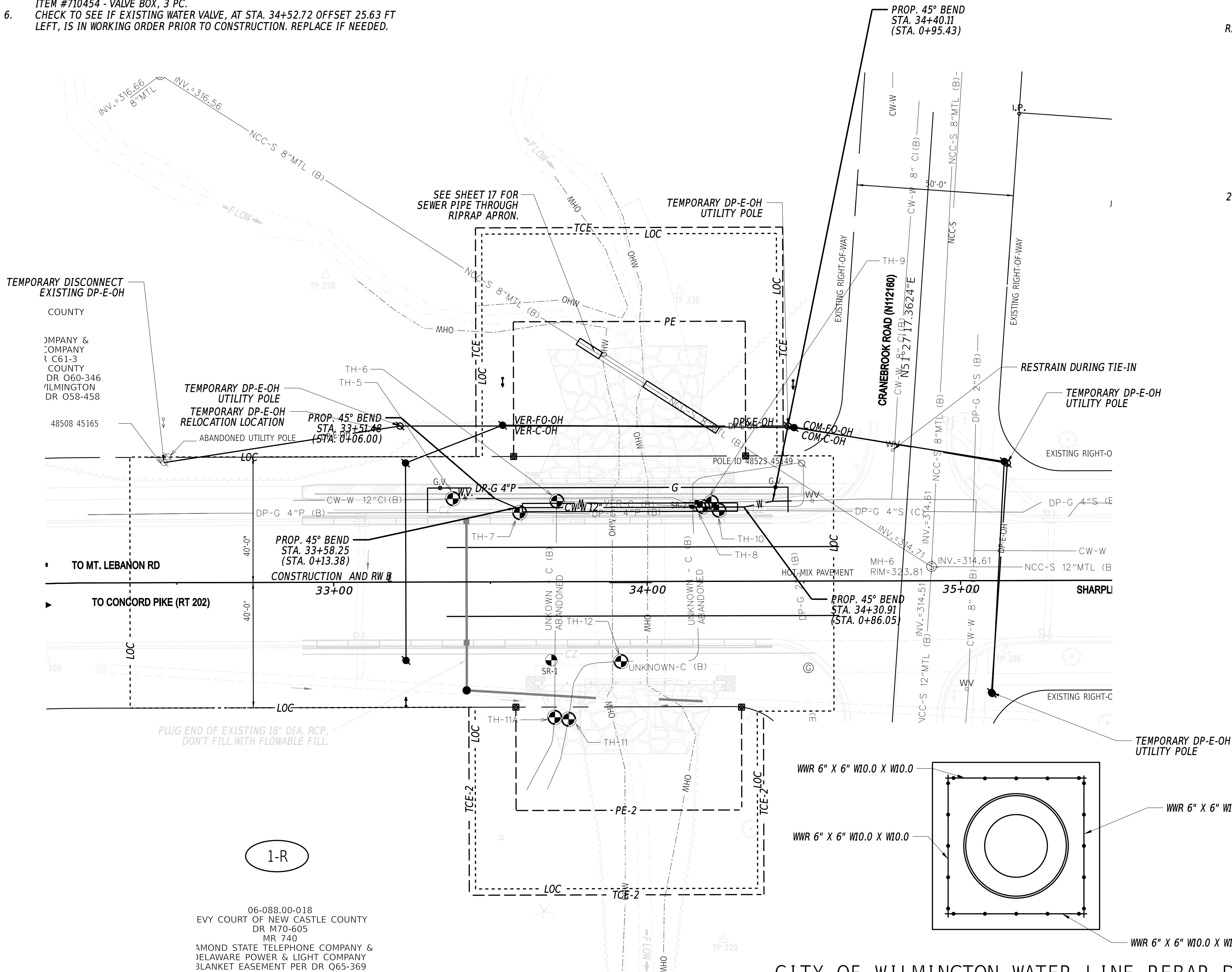
SECTION

BR

SHEET NO.

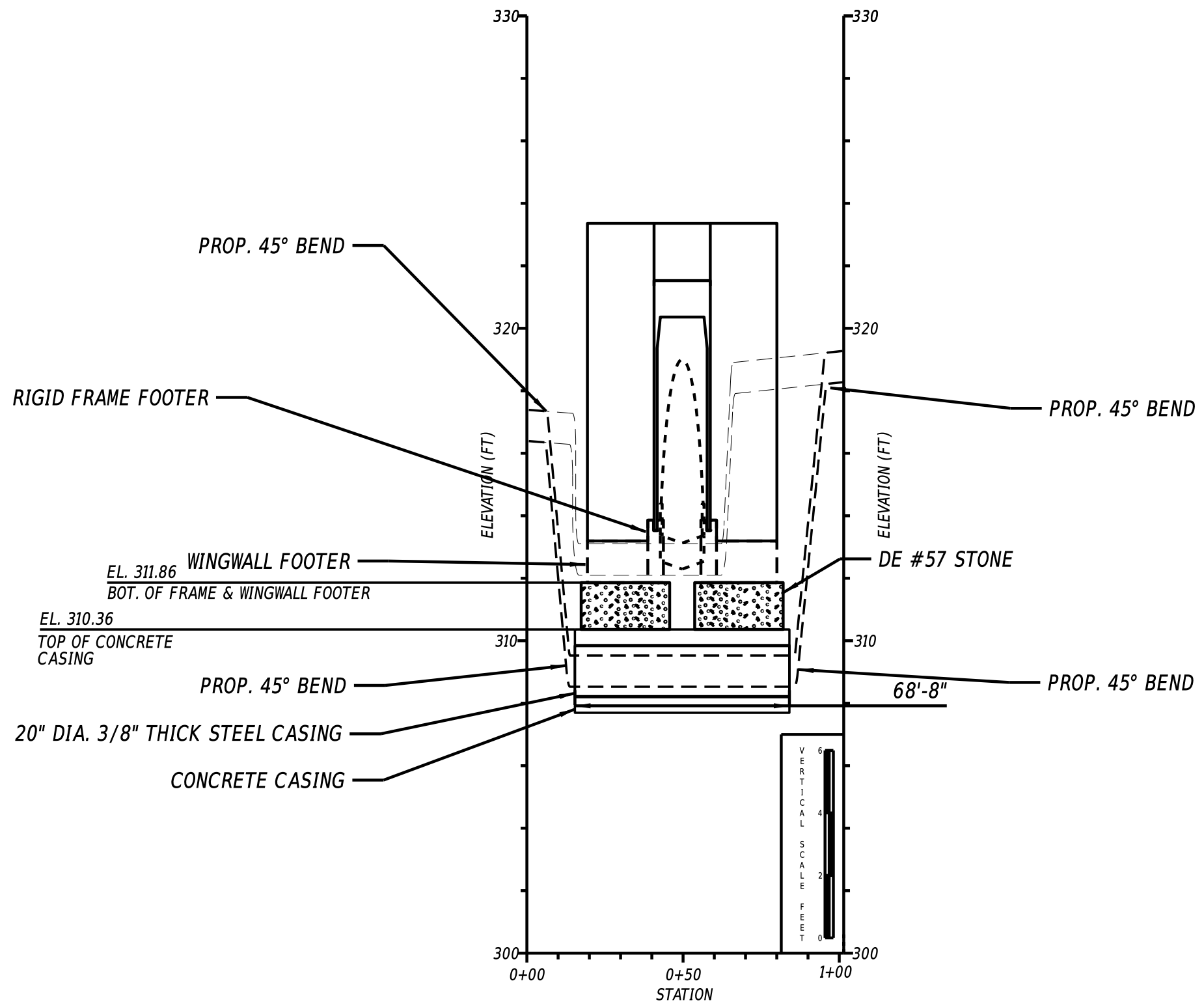
31

- NOTE:
1. THERE ARE FOUR 45° BENDS IN THE PROPOSED CITY OF WILMINGTON WATER LINE. SEE PROFILE ON THIS SHEET FOR ELEVATIONS (TYP.)
 2. THRUST BLOCKS ARE REQUIRED UNDER EACH BEND AND FITTING. SEE CITY OF WILMINGTON DEPARTMENT OF PUBLIC WORKS WATER DISTRIBUTION SYSTEM STANDARD SPECIFICATIONS AND DETAILS FOR INFORMATION REGARDING THRUST BLOCKS.
 3. SUPPORT AND MAINTAIN THE EXISTING WATER MAIN UNTIL THE PROPOSED WATER MAIN IS INSTALLED, THEN REMOVE THE EXISTING WATER MAIN WHEN TIEING IN THE PROPOSED WATER MAIN. SUPPORTING AND MAINTAIN THE EXISTING WATER MAIN IS INCIDENTAL TO ITEM #211000.
 4. PROPOSED 12" INSERTION WATER VALVE AT STA. 33+42 OFFSET 26.5 FT LEFT TO BE PAID UNDER ITEM #710122 - GATE VALVES, 12".
 5. PROPOSED VALVE BOX AT STA. 33+42 OFFSET 26.5 FT LEFT TO BE PAID UNDER ITEM #710454 - VALVE BOX, 3 PC.
 6. CHECK TO SEE IF EXISTING WATER VALVE, AT STA. 34+52.72 OFFSET 25.63 FT LEFT, IS IN WORKING ORDER PRIOR TO CONSTRUCTION. REPLACE IF NEEDED.



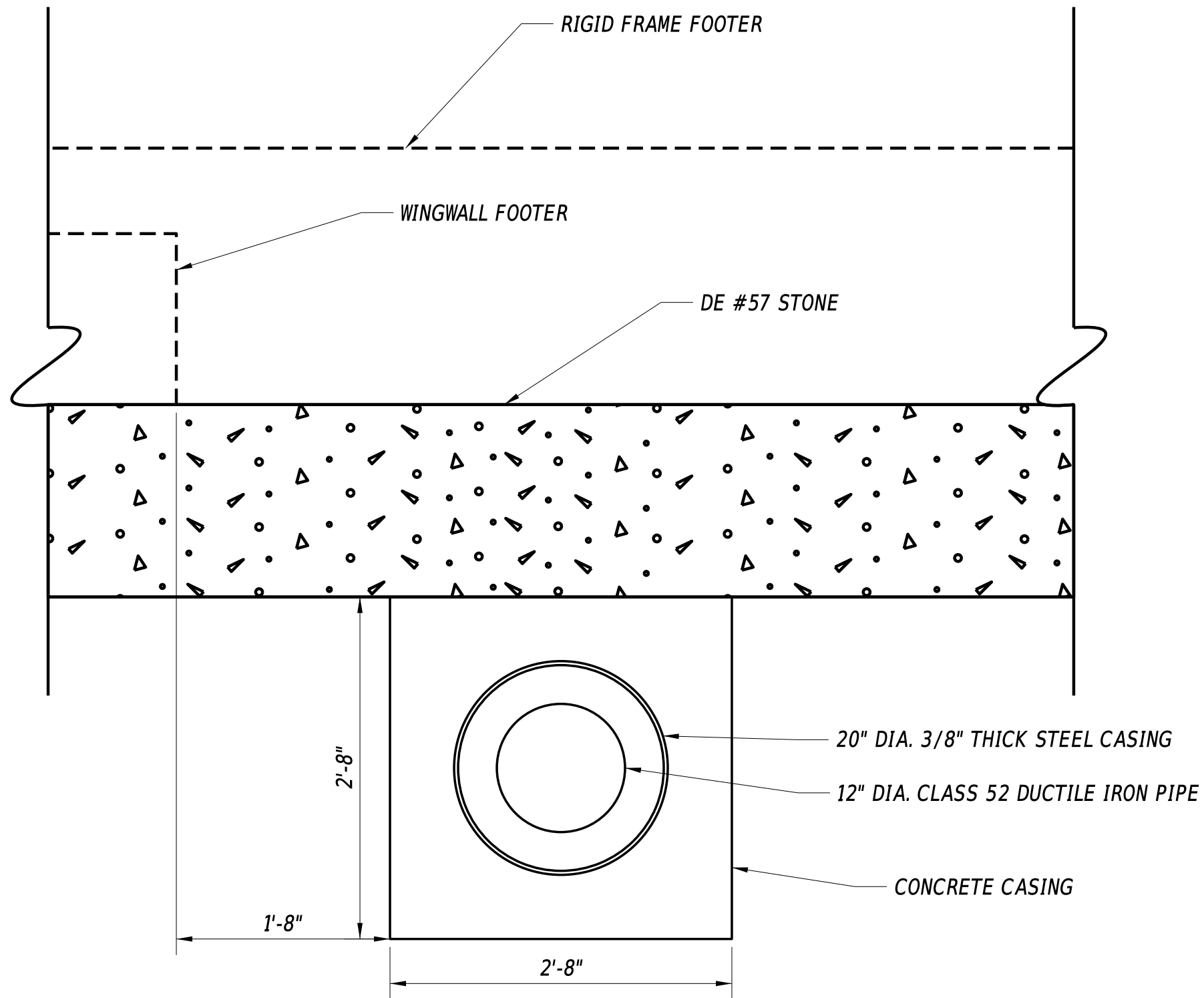
CITY OF WILMINGTON WATER LINE REBAR DETAIL

1" = 1'-0"



CITY OF WILMINGTON WATER LINE PROFILE

1" = 40'-0"

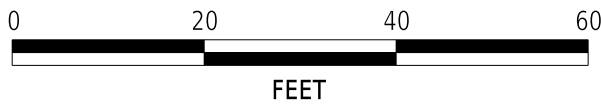


CITY OF WILMINGTON WATER LINE SECTION

1" = 1'-0"

ADDENDA / REVISIONS

SCALE



BR 1-022 AND 1-525 ON
SHARPLEY ROAD

CONTRACT

T201807103

COUNTY

NEW CASTLE

BRIDGE NO.

1-022

DESIGNED BY:

MAH

CHECKED BY:

JAT

UTILITY RELOCATION PLAN

SECTION

BR

SHEET NO.

32

06-076.00-075
ANN C. SHIELDS
WR 100848
DR N83-846
MF 841

EXISTING RIGHT-OF-WAY

48246 45257



12A

SEE SHEETS 39-40
FOR SIDEWALK WORK
CONSTRUCTION PLANS



12B



12C



HOT MIX PAVEMENT

4+00

5+00

6+00

7+00

CONSTRUCTION AND RW @
SHARPLEY ROAD (N229)

8+00

TO MT. LEBANON RD

TO CONCORD PIKE (RT 202)

9+00

10+00

EXISTING RIGHT-OF-WAY

06-076.00-082
JOSEPH M. KWIATKOWSKI &
MARYANNE O. KWIATKOWSKI, H/W
DR B73-335
MF 740

N16°45'21.37"E
FALKIRK ROAD (N112190)

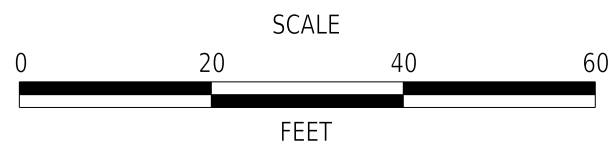
50'-0"

EXISTING RIGHT-OF-WAY

EXISTING RIGHT-OF-WAY

NOTE:
SEE PAGE 42 FOR SIGN SCHEDULE

ADDENDA / REVISIONS



BR 1-022 AND 1-525 ON
SHARPLEY ROAD

CONTRACT

T201807103

COUNTY

NEW CASTLE

BRIDGE NO.

1-525

DESIGNED BY: MAH

CHECKED BY: JAT

SIGNING, STRIPING
AND CONDUIT PLAN

SECTION

BR

SHEET NO.

33

PAVEMENT MARKINGS LEGEND

SYM	ITEM	QUANTITY
(P1)	EPOXY RESIN PAINT PAVEMENT STRIPING, YELLOW 5" SOLID DOUBLE LINE (ITEM 817013)	510 LF

1-L

06-064.00-033
NEW CASTLE COUNTY
DR Y-87-381
MF 1141

SEE SHEETS 40-41
FOR SIDEWALK WORK
CONSTRUCTION PLANS

EXISTING RIGHT-OF-WAY

48279 45247

D.I.

W.V.

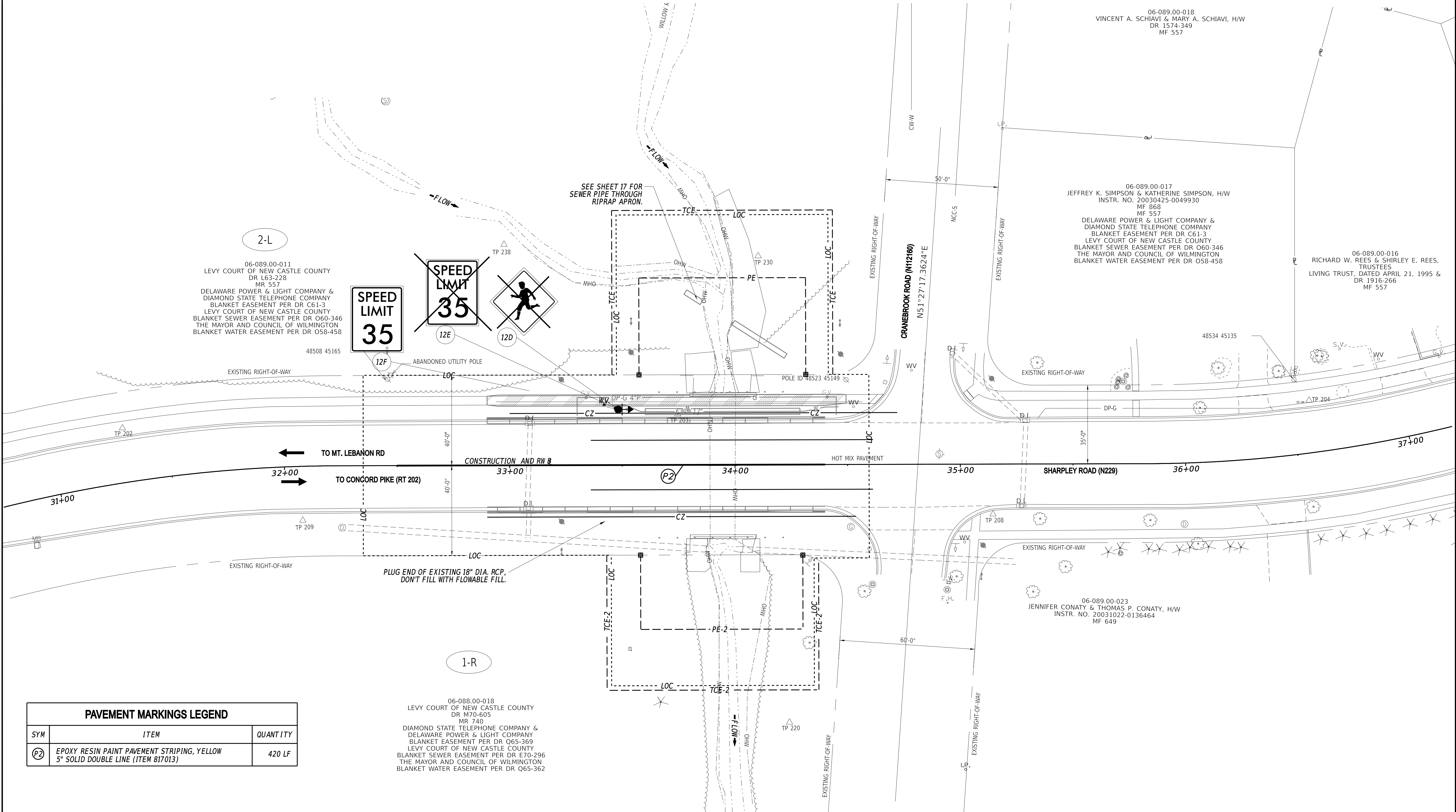
(P)

48288 45232

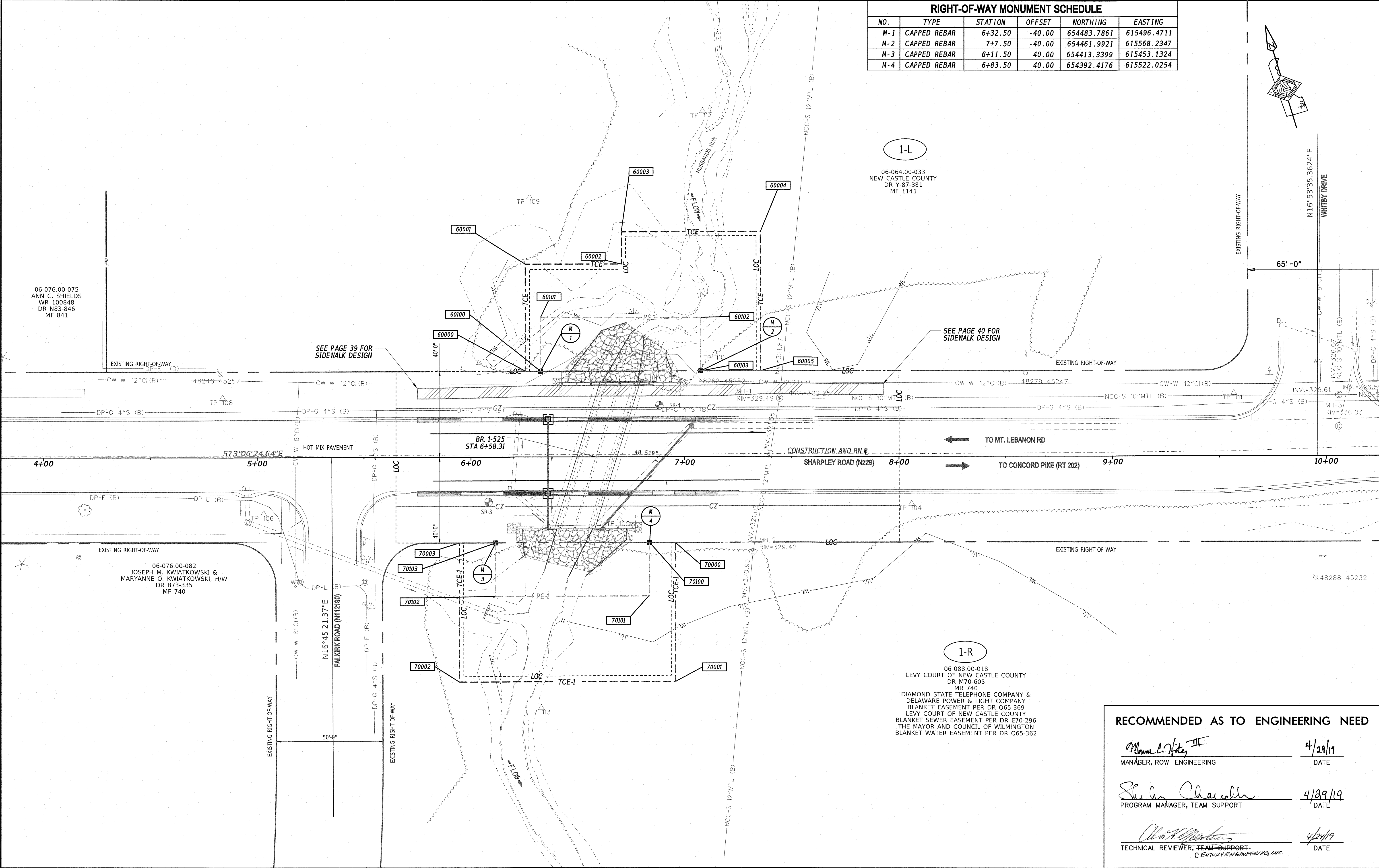
1-R

06-088.00-018
LEVY COURT OF NEW CASTLE COUNTY
DR M70-605
MR 740
DIAMOND STATE TELEPHONE COMPANY &
DELAWARE POWER & LIGHT COMPANY
BLANKET EASEMENT PER DR Q65-369
LEVY COURT OF NEW CASTLE COUNTY
BLANKET SEWER EASEMENT PER DR E70-296
THE MAYOR AND COUNCIL OF WILMINGTON
BLANKET WATER EASEMENT PER DR Q65-362

NOTE:
SEE PAGE 42 FOR SIGN SCHEDULE



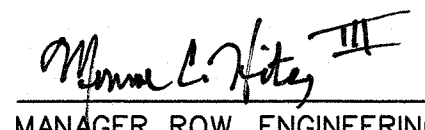
RIGHT-OF-WAY MONUMENT SCHEDULE					
NO.	TYPE	STATION	OFFSET	NORTHING	EASTING
M-1	CAPPED REBAR	6+32.50	-40.00	654483.7861	615496.4711
M-2	CAPPED REBAR	7+7.50	-40.00	654461.9921	615568.2347
M-3	CAPPED REBAR	6+11.50	40.00	654413.3399	615453.1324
M-4	CAPPED REBAR	6+83.50	40.00	654392.4176	615522.0254



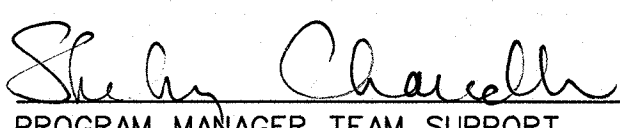
1-L
06-064.00-033
NEW CASTLE COUNTY
DR Y-87-381
MF 1141

1-R
06-088.00-018
LEVY COURT OF NEW CASTLE COUNTY
DR M70-605
MR 740
DIAMOND STATE TELEPHONE COMPANY &
DELAWARE POWER & LIGHT COMPANY
BLANKET EASEMENT PER DR Q65-369
LEVY COURT OF NEW CASTLE COUNTY
BLANKET SEWER EASEMENT PER DR E70-296
THE MAYOR AND COUNCIL OF WILMINGTON
BLANKET WATER EASEMENT PER DR Q65-362


RECOMMENDED AS TO ENGINEERING NEED


MANAGER, ROW ENGINEERING

4/29/19
DATE


PROGRAM MANAGER, TEAM SUPPORT

4/29/19
DATE

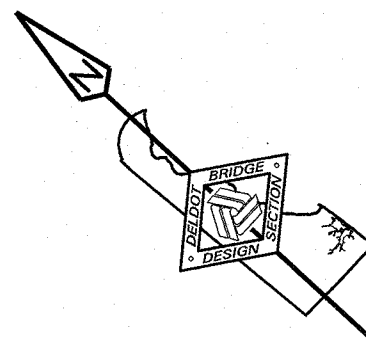

TECHNICAL REVIEWER, TEAM SUPPORT
CENTURY ENGINEERING, INC.

4/29/19
DATE

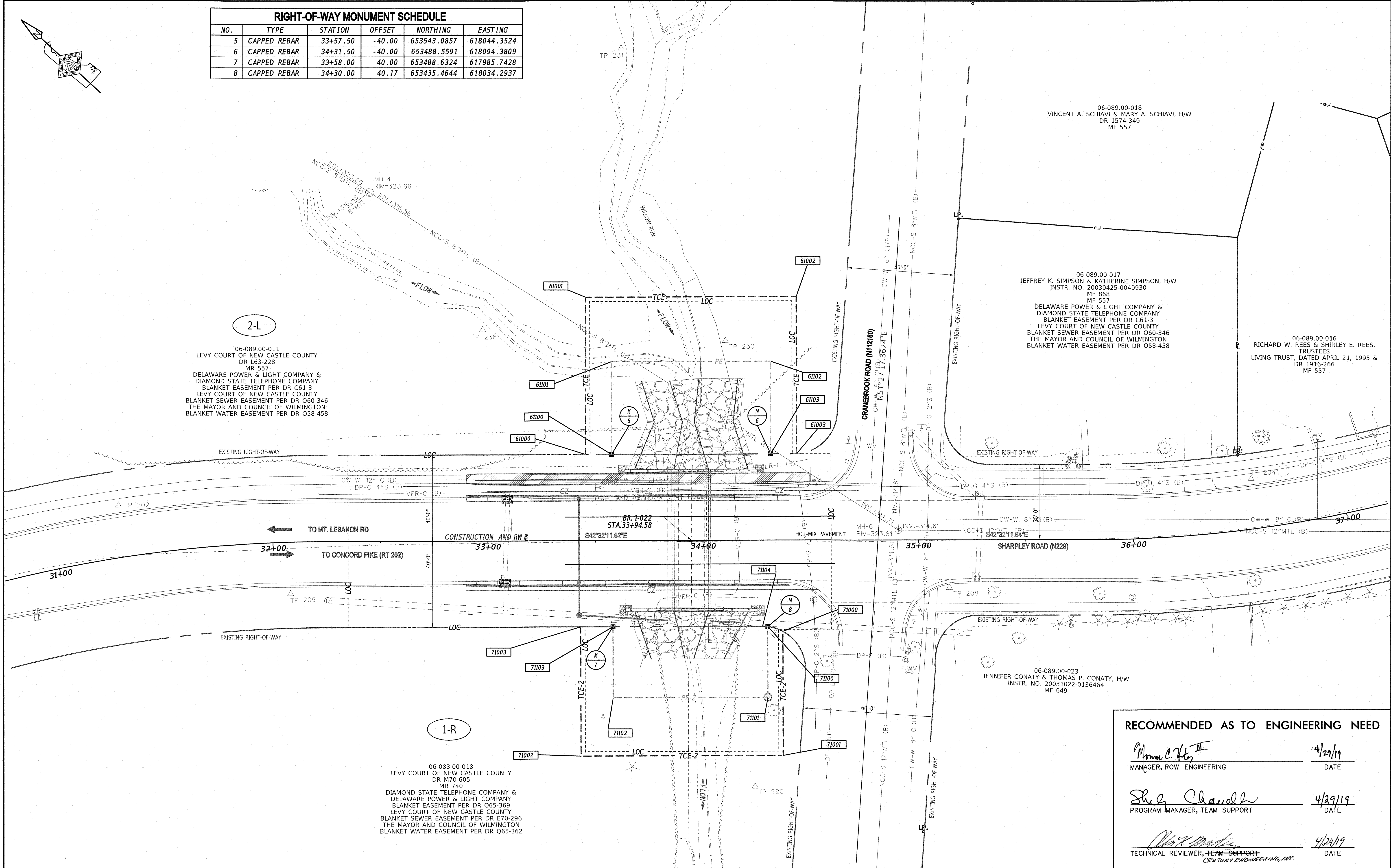
ADDENDA / REVISIONS		SCALE 0 20 40 60 FEET	BR 1-022 AND 1-525 ON N229 SHARPLEY ROAD OVER WILLOW RUN AND HUSBANDS RUN	CONTRACT T201807103	BRIDGE NO. 1-525	RIGHT-OF-WAY PLAN	SECTION BR
				COUNTY NEW CASTLE	DESIGNED BY: MAH CHECKED BY: JAT		SHEET NO. 35

13-MAR-2019
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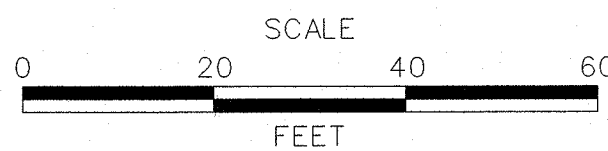
13-MAR-2019
Y:\NEWCASTL\229\Bridg\T201807103\500_CADD\530_PLANS_DGN\CP 1-022.dgn



RIGHT-OF-WAY MONUMENT SCHEDULE					
NO.	TYPE	STATION	OFFSET	NORTHING	EASTING
5	CAPPED REBAR	33+57.50	-40.00	653543.0857	618044.3524
6	CAPPED REBAR	34+31.50	-40.00	653488.5591	618094.3809
7	CAPPED REBAR	33+58.00	40.00	653488.6324	617985.7428
8	CAPPED REBAR	34+30.00	40.17	653435.4644	618034.2937



ADDENDA / REVISIONS



**BR 1-022 AND 1-525 ON N229
SHARPLEY ROAD OVER
WILLOW RUN AND HUSBANDS RUN**

CONTRACT	BRIDGE NO.	1-022
T201807103	DESIGNED BY:	MAH
COUNTY	CHECKED BY:	JAT
NEW CASTLE		

RIGHT-OF-WAY PLAN

SECTION
BR
SHEET NO.
36

RECOMMENDED AS TO ENGINEERING NEED

	4/29/19
MANAGER, ROW ENGINEERING	DATE
	4/29/19
PROGRAM MANAGER, TEAM SUPPORT	DATE
	4/29/19
TECHNICAL REVIEWER, TEAM SUPPORT	DATE

23-NOV-2020 16:20 Y:\NEWCASTLE\1229\Bridges\T20180710\31500_CADD\530_PLANS_DGN\Sheet Models\37RB.dgn

ASSESSMENT NUMBER		OWNERSHIP OF RECORD					TYPE OF ACQUISITION		TITLE SOURCE		PARCEL AREA (ACRES)	
06-064.00-033		(1-L) NEW CASTLE COUNTY					P/E		DR Y87-381		60.41	
ALIGNMENT NUMBER & DESCRIPTION: 1000 - CONSTRUCTION & RW BASELINE												
PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **	
60100	1000	6+32.50	-40.00	654483.7861	615496.4711	N 16°53'35.36" E	25.00					
60101	1000	6+32.50	-65.00	654507.7074	615503.7358	S 73°06'24.64" E	75.00					
60102	1000	7+07.50	-65.00	654485.9133	615575.4994	S 16°53'35.36" W	25.00					
60103	1000	7+07.50	-40.00	654461.9921	615568.2347	N 73°06'24.64" W	75.00					
60100	1000	6+32.50	-40.00	654483.7861	615496.4711							
FIGURE PE_1L AREA = 1875.0000 SQ. FT. (0.0430 ACRES)												
ASSESSMENT NUMBER		OWNERSHIP OF RECORD					TYPE OF ACQUISITION		TITLE SOURCE		PARCEL AREA (ACRES)	
06-064.00-033		(1-L) NEW CASTLE COUNTY					TCE		DR Y87-381		60.41	
ALIGNMENT NUMBER & DESCRIPTION: 1000 - CONSTRUCTION & RW BASELINE												
PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **	
60000	1000	6+25.50	-40.00	654485.8203	615489.7731	N 16°53'35.36" E	50.00					
60001	1000	6+25.50	-90.00	654533.6627	615504.3025	S 73°06'24.64" E	45.00					
60002	1000	6+70.50	-90.00	654520.5862	615547.3607	N 16°53'35.36" E	15.00					
60003	1000	6+70.50	-105.00	654534.9389	615551.7195	S 73°06'24.64" E	65.00					
60004	1000	7+35.50	-105.00	654516.0507	615613.9147	S 16°53'35.36" W	65.00					
60005	1000	7+35.50	-40.00	654453.8556	615595.0265	N 73°06'24.64" W	28.00					
60103	1000	7+07.50	-40.00	654461.9921	615568.2347	N 16°53'35.36" E	25.00					
60102	1000	7+07.50	-65.00	654485.9133	615575.4994	N 73°06'24.64" W	75.00					
60101	1000	6+32.50	-65.00	654507.7074	615503.7358	S 16°53'35.36" W	25.00					
60100	1000	6+32.50	-40.00	654483.7861	615496.4711	N 73°06'24.64" W	7.00					
60000	1000	6+25.50	-40.00	654485.8203	615489.7731							
FIGURE TCE_1L AREA = 4600.0000 SQ. FT. (0.1056 ACRES)												
ASSESSMENT NUMBER		OWNERSHIP OF RECORD					TYPE OF ACQUISITION		TITLE SOURCE		PARCEL AREA (ACRES)	
06-089.00-011		(2-L) LEVY COURT OF NEW CASTLE COUNTY					P/E		DR L63-228		8.16	
ALIGNMENT NUMBER & DESCRIPTION: 1000 - CONSTRUCTION & RW BASELINE												
PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **	
61100	1000	33+57.50	-40.00	653543.0857	618044.3524	N 47°27'48.38" E	43.00					
61101	1000	33+57.50	-83.00	653572.1563	618076.0368	S 42°32'11.62" E	74.00					
61102	1000	34+31.50	-83.00	653517.6297	618126.0653	S 47°27'48.38" W	43.00					
61103	1000	34+31.50	-40.00	653488.5591	618094.3809	N 42°32'11.62" W	74.00					
61100	1000	33+57.50	-40.00	653543.0857	618044.3524							
FIGURE PE_2L AREA = 3182.0007 SQ. FT. (0.0730 ACRES)												
ASSESSMENT NUMBER		OWNERSHIP OF RECORD					TYPE OF ACQUISITION		TITLE SOURCE		PARCEL AREA (ACRES)	
06-089.00-011		(2-L) LEVY COURT OF NEW CASTLE COUNTY					TCE		DR L63-228		8.16	
ALIGNMENT NUMBER & DESCRIPTION: 1000 - CONSTRUCTION & RW BASELINE												
PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **	
61000	1000	33+45.50	-40.00	653551.9279	618036.2397	N 47°27'48.38" E	73.00					
61001	1000	33+45.50	-113.00	653601.2803	618090.0295	S 42°32'11.62" E	98.00					
61002	1000	34+43.50	-113.00	653529.0694	618156.2834	S 47°27'48.38" W	73.00					
61003	1000	34+43.50	-40.00	653479.7170	618102.4936	N 42°32'11.62" W	12.00					
61103	1000	34+31.50	-40.00	653488.5591	618094.3809	N 47°27'48.38" E	43.00					
61102	1000	34+31.50	-83.00	653517.6297	618126.0653	N 42°32'11.62" W	74.00					
61101	1000	33+57.50	-83.00	653572.1563	618076.0368	S 47°27'48.38" W	43.00					
61100	1000	33+57.50	-40.00	653543.0857	618044.3524	N 42°32'11.62" W	12.00					
61000	1000	33+45.50	-40.00	653551.9279	618036.2397							
FIGURE TCE_2L AREA = 3971.9989 SQ. FT. (0.0912 ACRES)												
ASSESSMENT NUMBER		OWNERSHIP OF RECORD					TYPE OF ACQUISITION		TITLE SOURCE		PARCEL AREA (ACRES)	
06-088.00-018		(1-R) LEVY COURT OF NEW CASTLE COUNTY					P/E-1		DR M70-605		25.50	
ALIGNMENT NUMBER & DESCRIPTION: 1000 - CONSTRUCTION & RW BASELINE												
PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **	
70100	1000	6+83.50	40.00	654392.4176	615522.0254	S 16°53'35.36" W	25.00					
70101	1000	6+83.50	65.00	654368.4964	615514.7607	N 73°06'24.64" W	72.00					
70102	1000	6+11.50	65.00	654389.4187	615445.8677	N 16°53'35.36" E	25.00					
70103	1000	6+11.50	40.00	654413.3399	615453.1324	S 73°06'24.67" E	72.00					
70100	1000	6+83.50	40.00	654392.4176	615522.0254							
FIGURE PE_1R AREA = 1799.9995 SQ. FT. (0.0413 ACRES)												
ASSESSMENT NUMBER		OWNERSHIP OF RECORD					TYPE OF ACQUISITION		TITLE SOURCE		PARCEL AREA (ACRES)	
06-088.00-018		(1-R) LEVY COURT OF NEW CASTLE COUNTY					P/E-2		DR M70-605		25.50	
ALIGNMENT NUMBER & DESCRIPTION: 1000 - CONSTRUCTION & RW BASELINE												
PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **	
71100	1000	34+30.00	40.17	653435.4644	618034.2937	S 47°27'48.38" W	32.83					
71101	1000	34+30.00	73.00	653413.2696	618010.1033	N 42°32'11.62" W	72.00					
71102	1000	33+58.00	73.00	653466.3225	617961.4269	N 47°27'48.38" E	33.00					
71103	1000	33+58.00	40.00	653488.6324	617985.7428	S 42°32'11.62" E	69.54					
71104	1000	34+27.53	40.00	653437.3957	618032.7528			S 38°35'02.82" E	2.47	2.47	20.17	
71100	1000	34+30.00	40.17	653435.4644	618034.2937							
FIGURE PE_1R2 AREA = 2375.8484 SQ. FT. (0.0545 ACRES)												

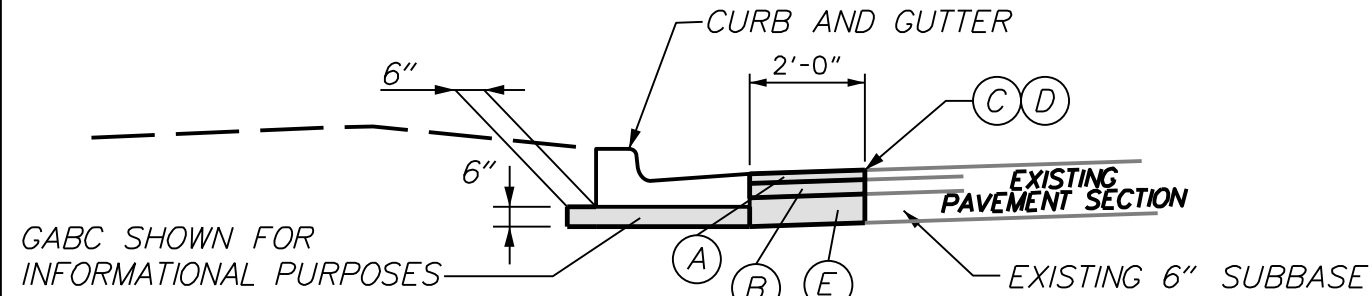
ASSESSMENT NUMBER		OWNERSHIP OF RECORD					TYPE OF ACQUISITION	TITLE SOURCE		PARCEL AREA (ACRES)	
06-088.00-018		(1-R) LEVY COURT OF NEW CASTLE COUNTY					TCE-1	DR M70-605		25.50	
ALIGNMENT NUMBER & DESCRIPTION: 1000 - CONSTRUCTION & RW BASELINE											
PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **
70000	1000	6+95.50	40.00	654388.9305	615533.5076	S 16°53'35.36" W	65.00				
70001	1000	6+95.50	105.00	654326.7354	615514.6194	N 73°06'24.64" W	101.00				
70002	1000	5+94.50	105.00	654356.0848	615417.9777	N 16°53'35.36" E	65.00				
70003	1000	5+94.50	40.00	654418.2799	615436.8659	S 73°06'24.64" E	17.00				
70103	1000	6+11.50	40.00	654413.3399	615453.1324	S 16°53'35.36" W	25.00				
70102	1000	6+11.50	65.00	654389.4187	615445.8677	S 73°06'24.64" E	72.00				
70101	1000	6+83.50	65.00	654368.4964	615514.7607	N 16°53'35.36" E	25.00				
70100	1000	6+83.50	40.00	654392.4176	615522.0254	S 73°06'24.64" E	12.00				
70000	1000	6+95.50	40.00	654388.9305	615533.5076						
FIGURE TCE_1R AREA = 4765.0011 SQ. FT. (0.1094 ACRES)											
ASSESSMENT NUMBER		OWNERSHIP OF RECORD					TYPE OF ACQUISITION	TITLE SOURCE		PARCEL AREA (ACRES)	
06-088.00-018		(1-R) LEVY COURT OF NEW CASTLE COUNTY					TCE-2	DR M70-605		25.50	
ALIGNMENT NUMBER & DESCRIPTION: 1000 - CONSTRUCTION & RW BASELINE											
PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **
71000	1000	34+37.00	42.44	653428.7708	618037.3523	S 47°27'48.38" W	57.56				
71001	1000	34+37.00	100.00	653389.8580	617994.9408	N 42°32'11.62" W	94.00				
71002	1000	33+43.00	100.00	653459.1215	617931.3911	N 47°27'48.38" E	60.00				
71003	1000	33+43.00	40.00	653499.6851	617975.6019	S 42°32'11.62" E	15.00				
71103	1000	33+58.00	40.00	653488.6324	617985.7428	S 47°27'48.38" W	33.00				
71102	1000	33+58.00	73.00	653466.3225	617961.4269	S 42°32'11.62" E	72.00				
71101	1000	34+30.00	73.00	653413.2696	618010.1033	N 47°27'48.38" E	32.83				
71100	1000	34+30.00	40.17	653435.4644	618034.2937			S 24°33'28.46" E	7.36	7.40	20.17
71000	1000	34+37.00	42.44	653428.7708	618037.3523						
FIGURE TCE_1R2 AREA = 3256.5255 SQ. FT. (0.0748 ACRES)											

[illegible]

										ACQUISITION CODES			
										FEE - ACQUISITION		P/E - PERMANENT EASEMENT	
										R/W - AREA OCCUPIED BY EXISTING R/W		TCE - TEMPORARY EASEMENT	
ADDENDA / REVISIONS				SCALE NOT NOTED	BR 1-022 AND 1-525 ON SHARPLEY ROAD	CONTRACT	BRIDGE NO.	1-022 & 1-525		RIGHT-OF-WAY TABULATION SHEET	SECTION		
						T201807103					BR		
						COUNTY	DESIGNED BY:	MAH			SHEET NO		
						NEW CASTLE	CHECKED BY:	JAT			38		

LEGEND

- (A) ITEM 401026 - BITUMINOUS CONCRETE, SUPERPAVE TYPE C, 160 GYRATIONS PG 64-22 PATCHING (2" THICKNESS)
- (B) ITEM 401027 - BITUMINOUS CONCRETE, SUPERPAVE TYPE B, 160 GYRATIONS PG 64-22 PATCHING (5" THICKNESS)
- (C) ITEM 504001 - CRACK AND JOINT SEALING LESS THAN 3/4 INCH WIDE
- (D) ITEM 762000 - SAW CUTTING, BITUMINOUS CONCRETE
- (E) ITEM 301002 - GRADED AGGREGATE BASE COURSE, TYPE B, PATCHING



TYPICAL CURB-PAVEMENT PATCH DETAIL

NOT TO SCALE

06-076.00-030
SCOTT TORNEK & ALEXANDRA TORNEK, HUSBAND AND WIFE
INSTR. 20110629-31814
MF 841

06-076.00-075
ANN C SHIELDS
WR 100848
D.R. N83-846
MF 841

06-076.00-160
NEW CASTLE COUNTY
D.R. 83-745

COORDINATE LIST

POINT NO.	STATION	OFFSET	NORTHING	EASTING
1042	13+54.53	51.26	654452.6564	615339.1164
1043	13+69.52	50.08	654449.4533	615353.8133
1044	13+74.58	50.07	654447.9960	615358.6537
1045	13+78.45	77.29	654420.8273	615354.4931
1046	13+79.59	62.29	654434.8580	615359.9227
1047	13+79.58	55.07	654441.7664	615362.0018
1048	10+92.78	59.91	654520.0361	615086.0397
1049	11+02.74	49.66	654526.9697	615098.5426
1050	11+12.46	49.61	654524.2074	615107.8543
1051	11+17.46	49.59	654522.7854	615112.6479
1052	11+33.97	50.71	654516.9385	615128.1284
1053	11+18.99	49.58	654522.3489	615114.1190

HORIZONTAL / VERTICAL CONTROL DATA

POINT	STATION	OFFSET	NORTHING	EASTING	ELEVATION
AB1	10+39.05	39.73 R	654554.8788	615040.4404	340.83
AB5	14+19.03	80.66 R	654405.8737	615392.3643	328.41

CONSTRUCTION ALIGNMENT CONTROL

POINT	STATION	OFFSET	NORTHING	EASTING
2000	10+00.00	0.00'	654604.2058	615014.5383
2001	24+00.00	0.00'	654199.5342	616354.7774

DATUM REFERENCE:

HORIZONTAL - THIS PROJECT IS REFERENCED TO THE DELAWARE STATE PLANE COORDINATE SYSTEM (NAD 83/2011).

VERTICAL - THIS PROJECT IS REFERENCED TO NAVD 88.

PAVEMENT MARKINGS LEGEND

SYMBOL	ITEM	QUANTITY
(A)	PERMANENT PAVEMENT STRIPING, SYMBOL/LEGEND, ALKYD-THERMOPLASTIC (ITEM 817002)	398 SF

COORDINATE LIST

POINT NO.	STATION	OFFSET	NORTHING	EASTING
1000	10+28.02	-17.28	654612.6511	615046.3543
1001	10+35.96	-24.35	654617.1198	615056.0052
1002	10+36.55	-29.31	654621.7053	615057.9985
1003	10+37.20	-34.85	654626.8153	615060.2197
1004	10+38.04	-49.86	654640.9426	615065.3643
1005	10+10.43	-18.34	654618.7497	615029.8277
1006	10+98.63	-22.44	654597.1828	615115.4481
1007	10+98.65	-37.94	654612.0078	615119.9403
1008	11+00.56	-43.81	654617.0800	615123.4736
1009	11+03.97	-48.32	654620.4129	615128.0425
1010	10+98.99	-17.41	654592.2609	615114.3382
1011	11+06.60	-11.79	654584.6840	615119.9946
1012	11+12.41	-11.77	654582.9825	615125.5489
1013	11+17.41	-11.75	654581.5180	615130.3297
1014	13+74.53	-11.37	654506.8338	615376.3659
1015	12+83.02	-11.34	654533.2594	615288.7550
1016	13+79.53	-11.38	654505.3925	615381.1536
1017	14+50.00	-11.43	654485.0775	615448.6341

CURB SCHEDULE

NO.	ITEM DESCRIPTION / TYPE	LENGTH
1	INTEGRAL P.C.C. CURB AND GUTTER, TYPE 1-8	21'
2	INTEGRAL P.C.C. CURB AND GUTTER, TYPE 1-8	21'
3	INTEGRAL P.C.C. CURB AND GUTTER, TYPE 2	10' *
4	INTEGRAL P.C.C. CURB AND GUTTER, TYPE 1-8	29'
5	INTEGRAL P.C.C. CURB AND GUTTER, TYPE 2	10' *
6	INTEGRAL P.C.C. CURB AND GUTTER, TYPE 1-8	5'
7	INTEGRAL P.C.C. CURB AND GUTTER, TYPE 1-8	24'

* INCLUDES TRANSITION FROM TYPE 1-8 TO TYPE 2

NOTE:

THE CONTRACTOR SHALL NOT DISTURB TREES EXCEPT TO PROVIDE VERTICAL CLEARANCE IN THE PEDESTRIAN ACCESS ROUTE IN ACCORDANCE WITH DELDOT PEDESTRIAN ACCESSIBILITY STANDARDS FOR FACILITIES IN THE PUBLIC RIGHT OF WAY SECTION 3.7.3. THIS NOTE APPLIES TO ALL TREES IN THE PROJECT LOC.

WOODLEY PARK

06-064.00-033
NEW CASTLE COUNTY
D.R. Y-87-381
MF 1141

11D Sharpley Rd
11E Falkirk Rd

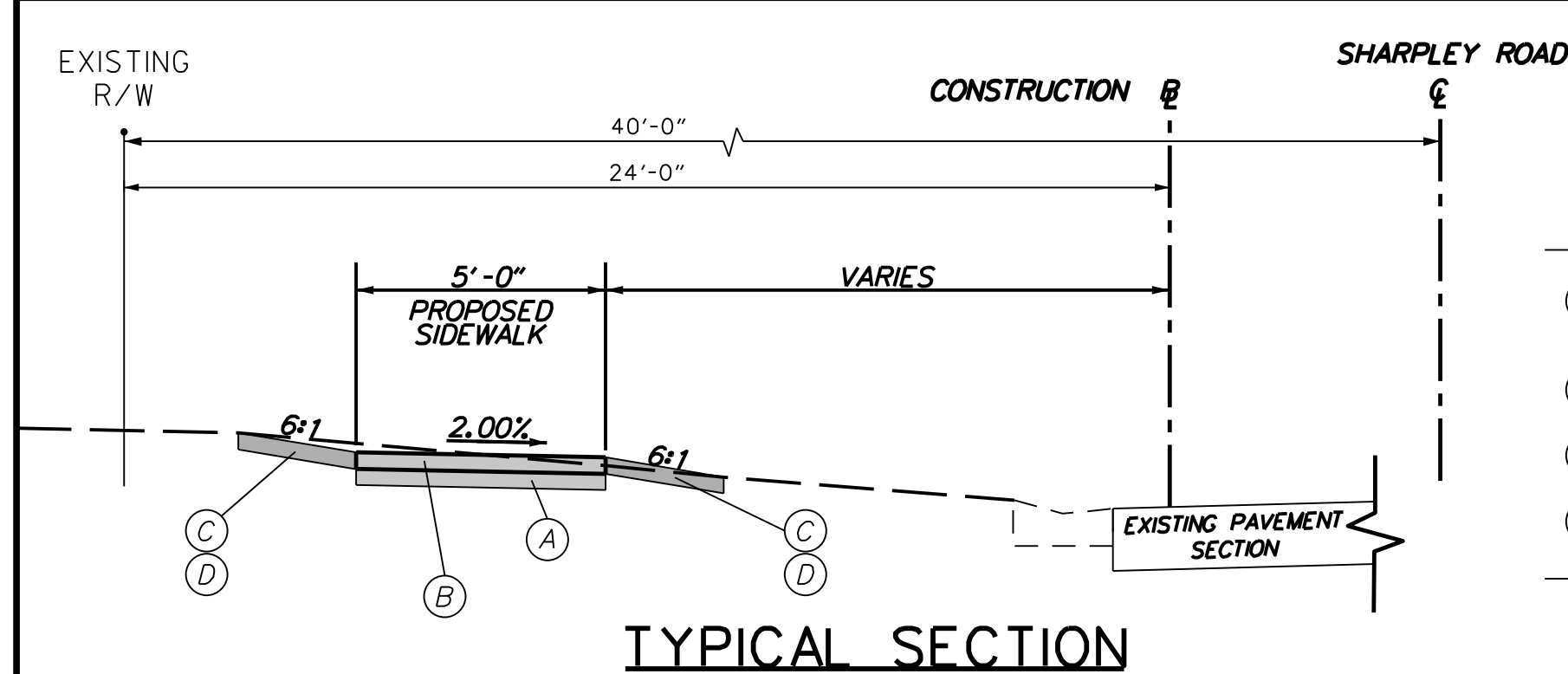
11F STOP

MATCHLINE STATION 14+50

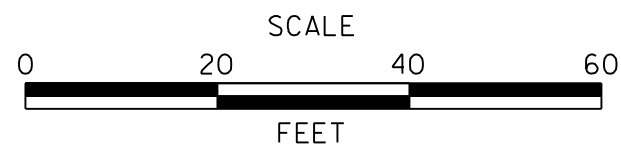
LEGEND

- (A) GRADED AGGREGATE BASE COURSE, TYPE B (INCIDENTAL TO ITEM 705001 AND 705002)
- (B) ITEM 705001 - P.C.C. SIDEWALK, 4"
- (C) ITEM 908003 - TOPSOILING, 4" DEPTH
- (D) ITEM 908016 - PERMANENT GRASS SEEDING, SUBDIVISION

TYPICAL SECTION



ADDENDA / REVISIONS



BR 1-022 AND 1-525 ON
SHARPLEY ROAD

CONTRACT

T201807103

COUNTY

NEW CASTLE

BRIDGE NO.

DESIGNED BY: AG

CHECKED BY: WM

CONSTRUCTION PLAN

SECTION

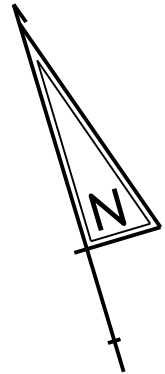
UEI

SHEET NO.

39

PAVEMENT MARKINGS LEGEND		
SYMBOL	ITEM	QUANTITY
(A)	PERMANENT PAVEMENT STRIPING, SYMBOL/LEGEND, ALKYD-THERMOPLASTIC (ITEM 817002)	119 SF

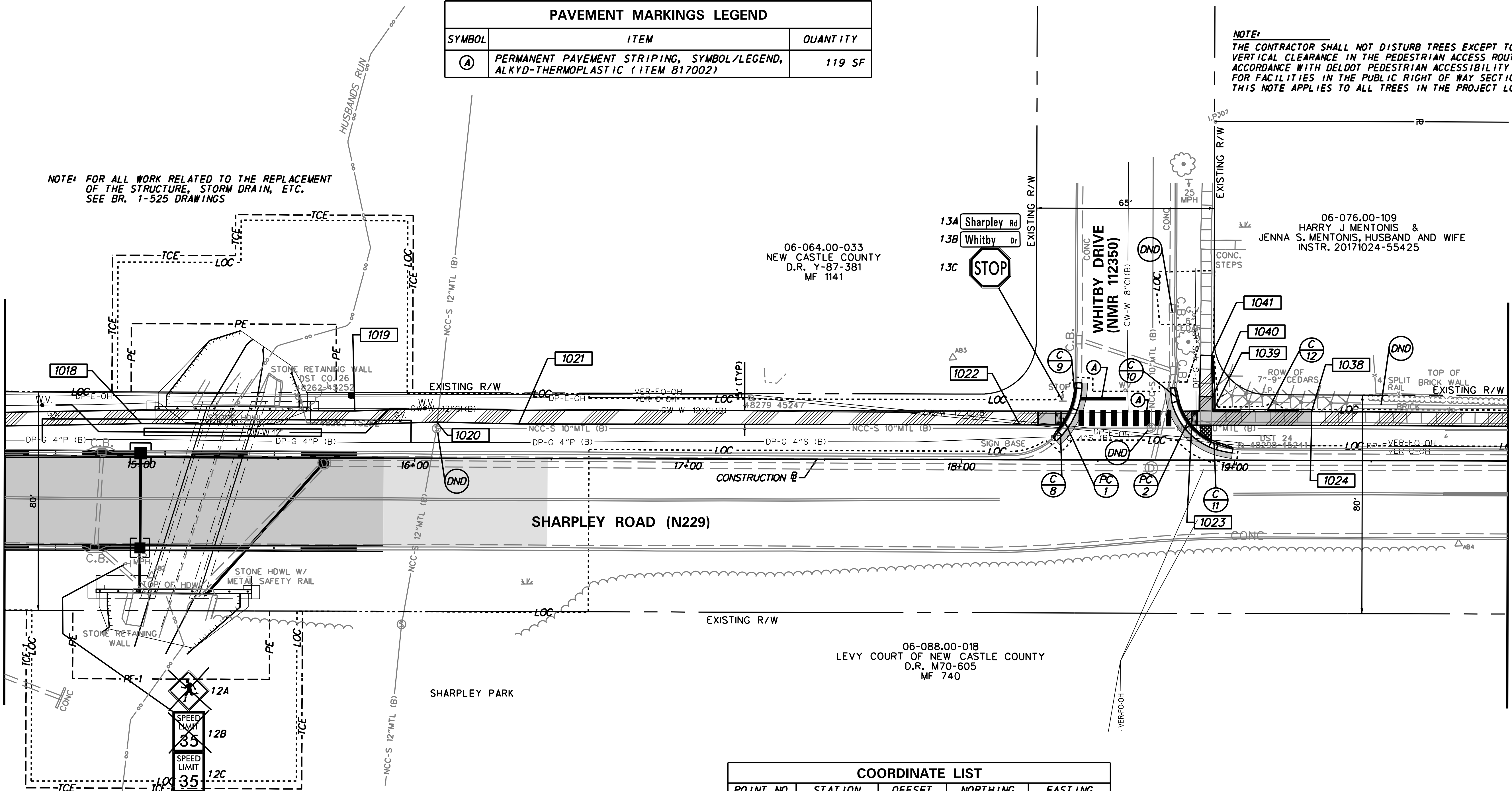
NOTE:
THE CONTRACTOR SHALL NOT DISTURB TREES EXCEPT TO PROVIDE VERTICAL CLEARANCE IN THE PEDESTRIAN ACCESS ROUTE IN ACCORDANCE WITH DELDOT PEDESTRIAN ACCESSIBILITY STANDARDS FOR FACILITIES IN THE PUBLIC RIGHT OF WAY SECTION 3.7.3. THIS NOTE APPLIES TO ALL TREES IN THE PROJECT LOC.



NOTE: FOR ALL WORK RELATED TO THE REPLACEMENT OF THE STRUCTURE, STORM DRAIN, ETC. SEE BR. 1-525 DRAWINGS

MATCHLINE STATION 14+50

MATCHLINE STATION 20+00



HORIZONTAL / VERTICAL CONTROL DATA					
POINT	STATION	OFFSET	NORTHING	EASTING	ELEVATION
AB2	15+03.90	43.16 R	654417.2386	615484.4518	328.05
AB3	17+96.80	37.29 L	654409.5899	615788.1089	333.14
AB4	19+82.06	30.29 R	654291.3442	615945.9184	338.76

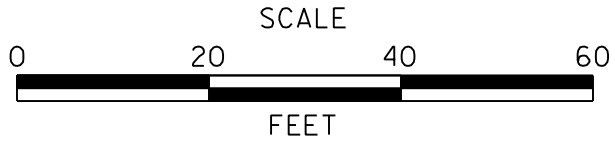
CONSTRUCTION ALIGNMENT CONTROL				
POINT	STATION	OFFSET	NORTHING	EASTING
2000	10+00.00	0.00'	654604.2058	615014.5383
2001	24+00.00	0.00'	654199.5342	616354.7774

DATUM REFERENCE:
HORIZONTAL - THIS PROJECT IS REFERENCED TO THE DELAWARE STATE PLANE COORDINATE SYSTEM (NAD 83/2011).
VERTICAL - THIS PROJECT IS REFERENCED TO NAVD 88.

COORDINATE LIST				
POINT NO.	STATION	OFFSET	NORTHING	EASTING
1018	15+00.00	-12.39	654471.5443	615496.7774
1019	15+78.00	-12.27	654448.8785	615571.4117
1020	16+08.00	-13.28	654441.1730	615600.4226
1021	16+38.00	-12.63	654431.8865	615628.9563
1022	18+21.41	-12.78	654379.0130	615804.5833
1023	18+84.27	-12.82	654360.8793	615864.7631
1024	19+28.13	-12.86	654348.2358	615906.7656
1038	19+28.14	-17.86	654353.0193	615908.2210
1039	18+92.03	-17.82	654363.4276	615873.6407
1040	18+92.03	-23.30	654368.6732	615875.2266
1041	18+91.42	-38.30	654383.2093	615878.9762

CURB SCHEDULE		
NO.	ITEM DESCRIPTION / TYPE	LENGTH
8	INTEGRAL P.C.C. CURB AND GUTTER, TYPE 1-8	3'
9	INTEGRAL P.C.C. CURB AND GUTTER, TYPE 1-8	8'
10	INTEGRAL P.C.C. CURB AND GUTTER, TYPE 1-8	7'
11	INTEGRAL P.C.C. CURB AND GUTTER, TYPE 1-8	15'
12	P.C.C. CURB, TYPE 1-8	57'

ADDENDA / REVISIONS	



BR 1-022 AND 1-525 ON SHARPLEY ROAD

CONTRACT	BRIDGE NO.	
T201807103	DESIGNED BY:	AG
COUNTY	CHECKED BY:	WM
NEW CASTLE		

CONSTRUCTION PLAN

SECTION
UEI
SHEET NO.
40

THE CONTRACTOR SHALL NOT DISTURB TREES EXCEPT TO PROVIDE VERTICAL CLEARANCE IN THE PEDESTRIAN ACCESS ROUTE IN ACCORDANCE WITH DELDOT PEDESTRIAN ACCESSIBILITY STANDARDS FOR FACILITIES IN THE PUBLIC RIGHT OF WAY SECTION 3.7.3. THIS NOTE APPLIES TO ALL TREES IN THE PROJECT LOC.



PAVEMENT MARKINGS LEGEND		
SYMBOL	ITEM	QUANTITY
(A)	PERMANENT PAVEMENT STRIPING, SYMBOL/LEGEND, ALKYD-THERMOPLASTIC (ITEM 817002)	113 SF

LEGEND

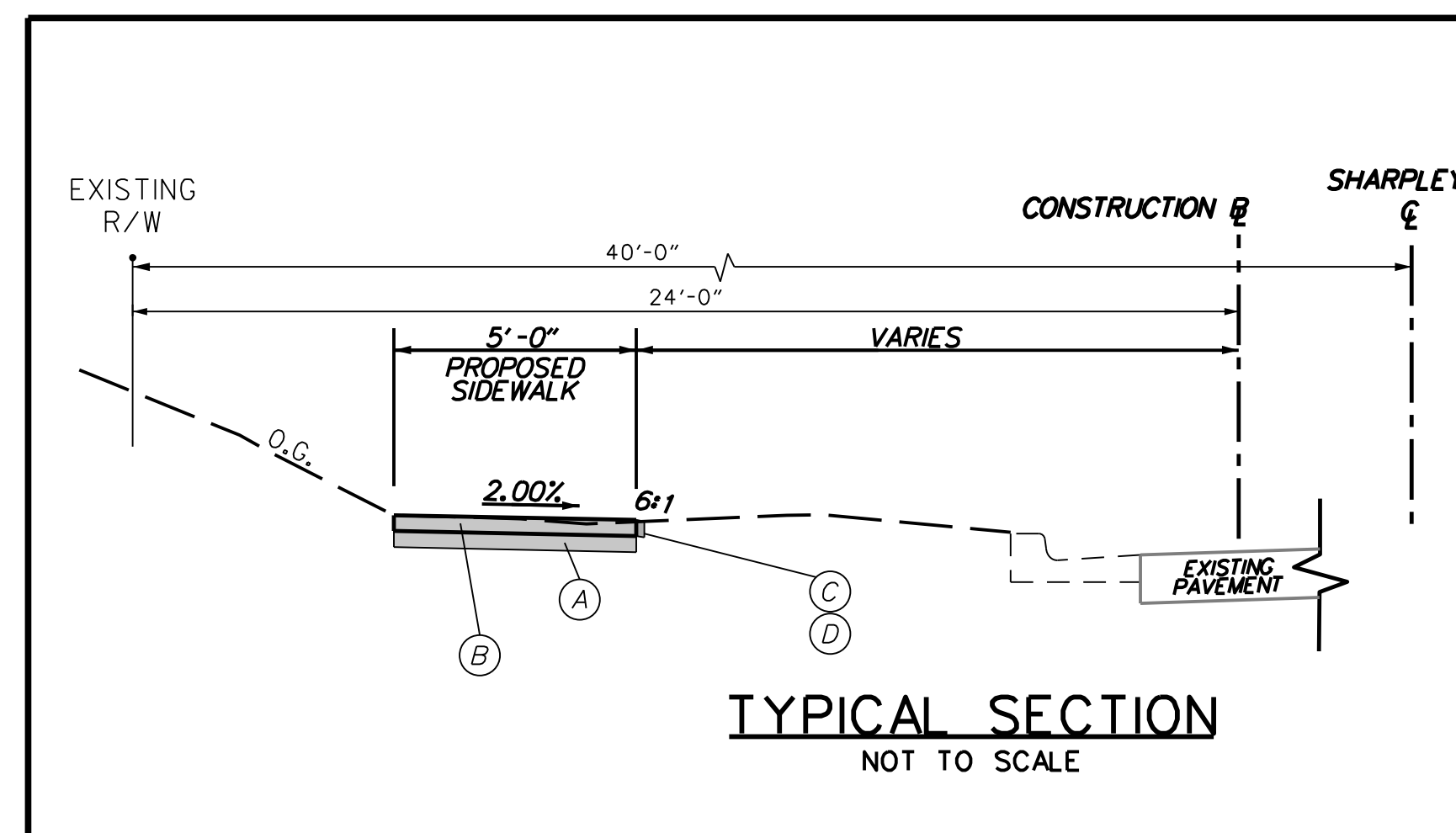
(A) GRADED AGGREGATE BASE COURSE, TYPE B (INCIDENTAL TO ITEM 705001 AND 705002)

(B) ITEM 705001 - P.C.C. SIDEWALK, 4"

(C) ITEM 908003 - TOPSOILING, 4" DEPTH

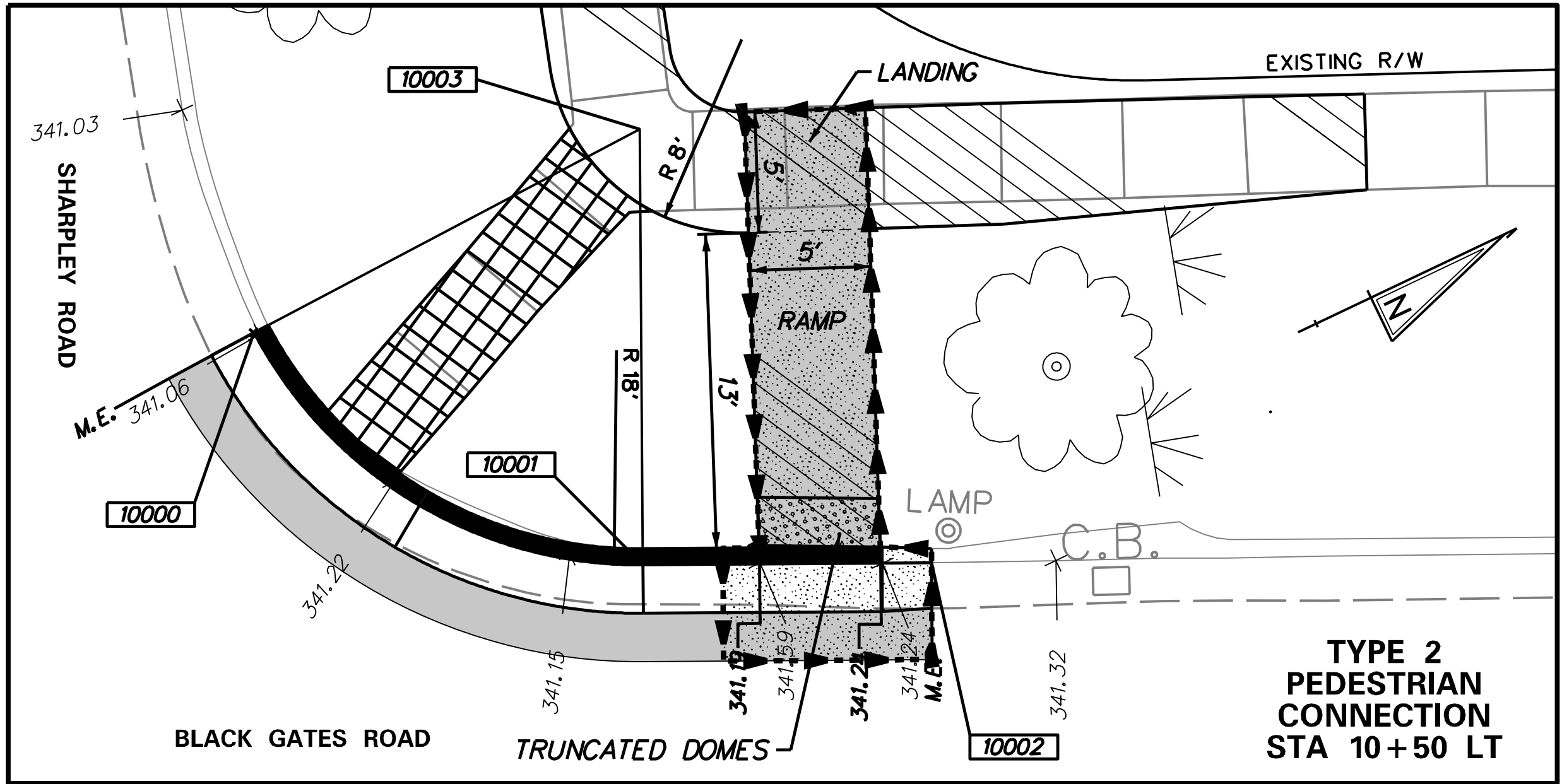
(D) ITEM 908016 - PERMANENT GRASS SEEDING, SUBDIVISION

DATUM REFERENCE:
HORIZONTAL - THIS PROJECT IS REFERENCED TO THE DELAWARE
STATE PLANE COORDINATE SYSTEM (NAD 83/2011).
VERTICAL - THIS PROJECT IS REFERENCED TO NAVD 88.

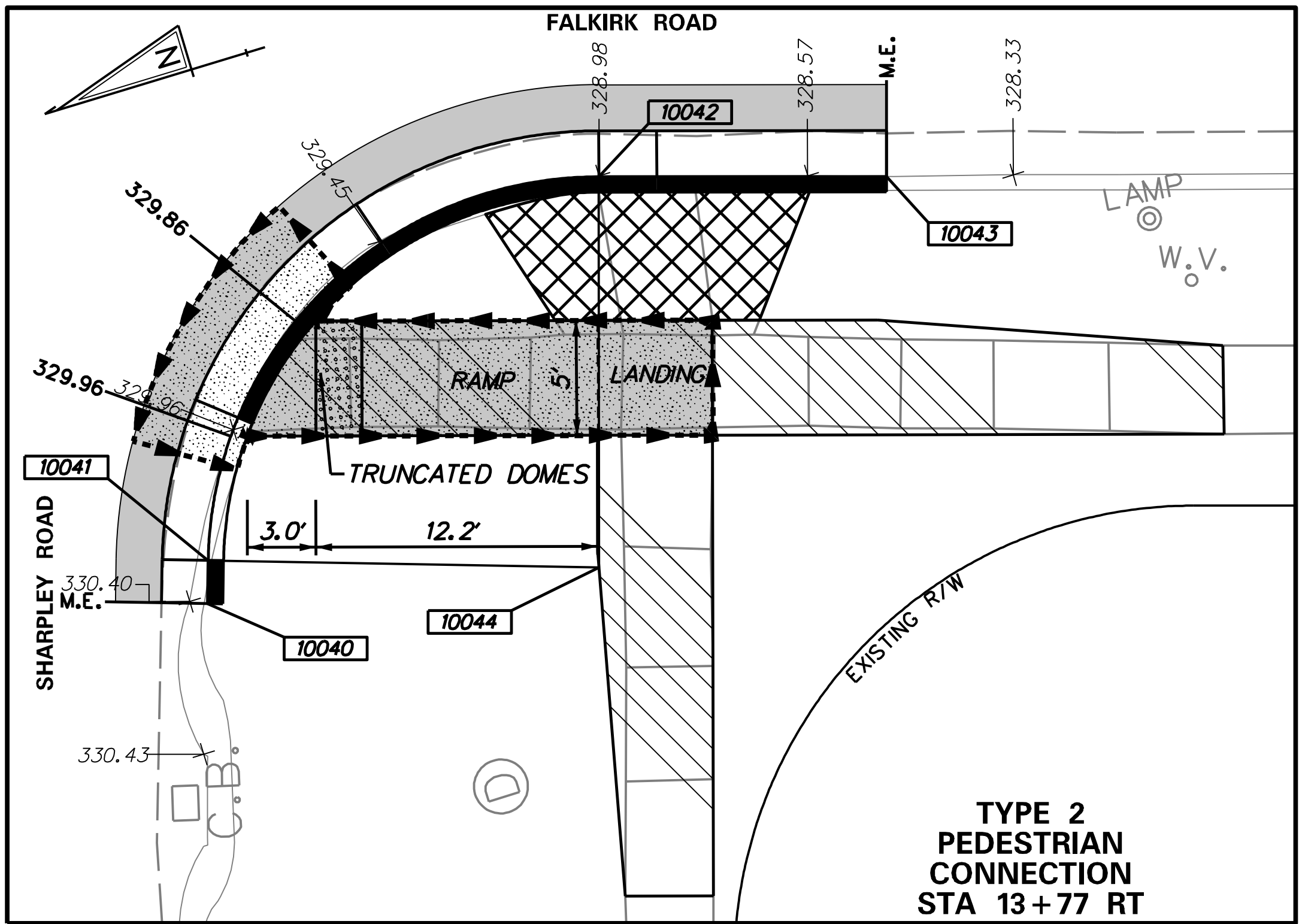
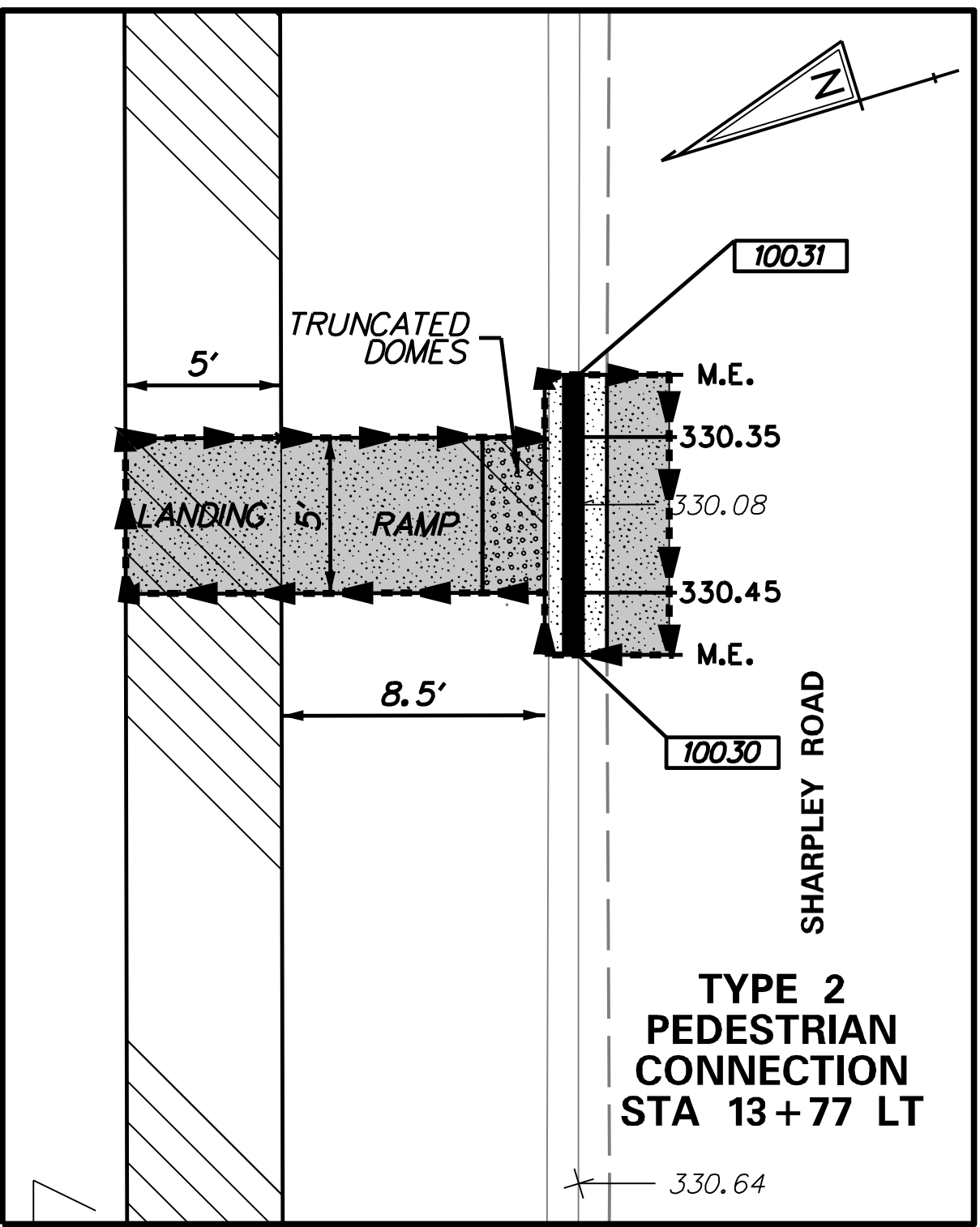
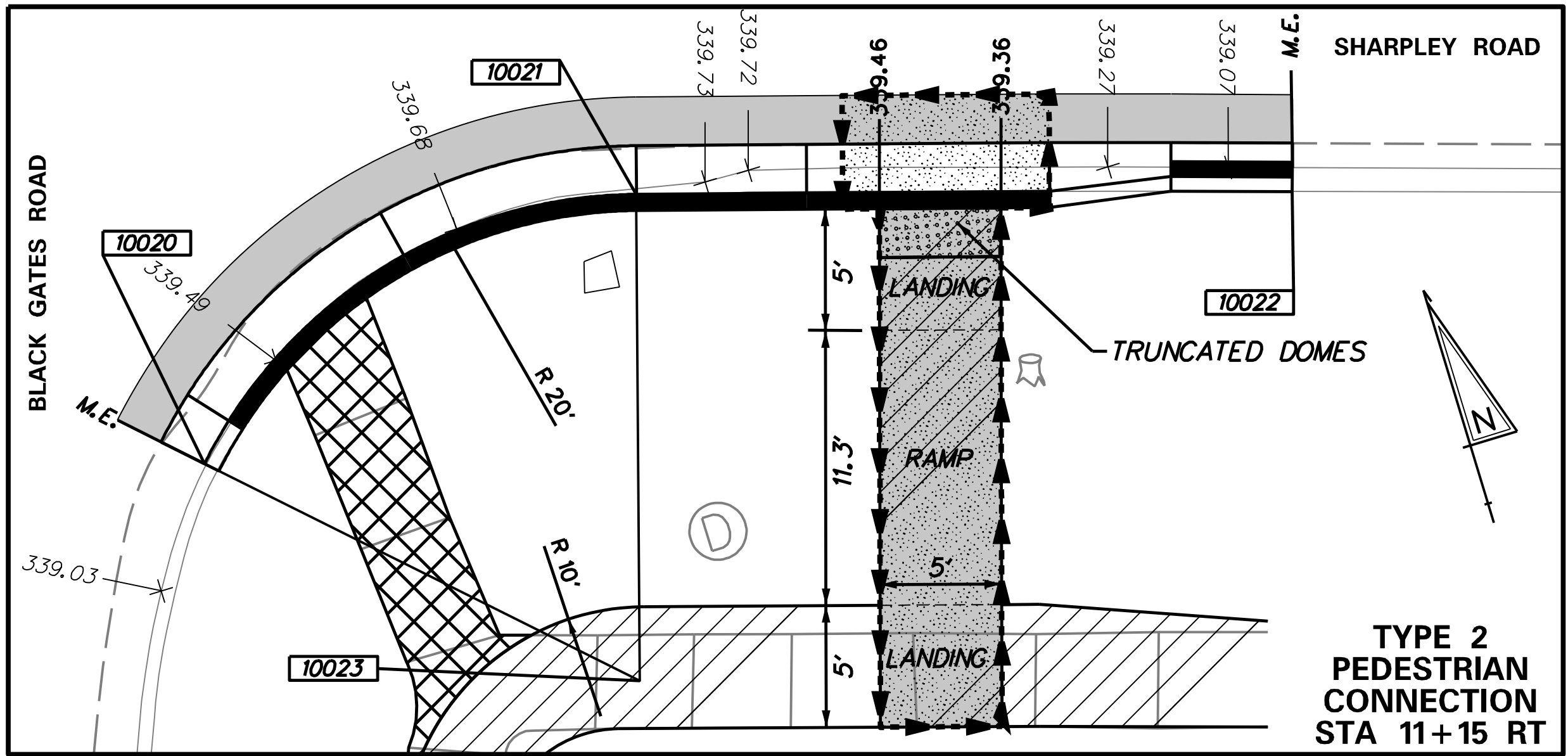
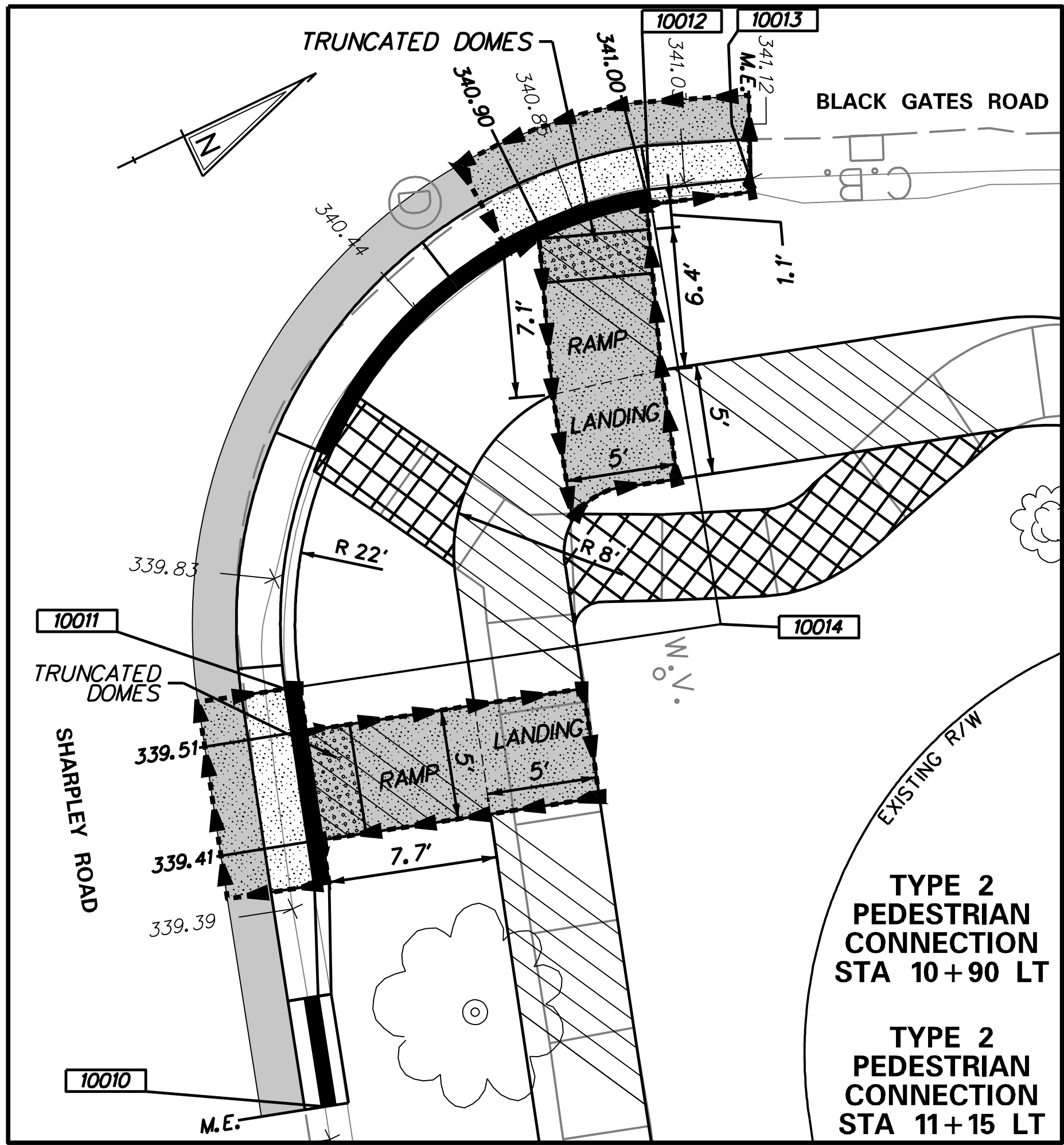
A horizontal scale bar with a black background and white markings. The word "SCALE" is centered above the bar, and "FEET" is centered below it. White tick marks are present at intervals of 20 units, labeled "0", "20", "40", and "60" from left to right. The bar is divided into three equal segments of 20 feet each.

CONTRACT	BRIDGE NO.	
T201807103		
COUNTY	DESIGNED BY: AG	
NEW CASTLE	CHECKED BY: WM	

SECTION
UEI
SHEET NO.
41



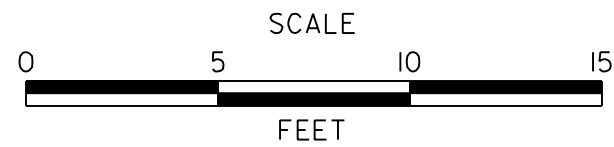
COORDINATE LIST					
POINT NO.	STATION	OFFSET		NORTHING	EASTING
10000	10+37.64	1.66	L	654594.9205	615051.0497
10001	10+50.85	17.70	L	654606.4474	615068.3321
10002	10+52.43	29.51	L	654617.2957	615073.2615
10003	10+31.05	20.55	L	654614.9028	615050.2074
10010	11+29.41	2.32	L	654569.0251	615139.0953
10011	11+10.39	3.38	L	654575.5375	615121.1953
10012	10+90.44	23.12	L	654600.1981	615107.8052
10013	10+90.64	27.74	L	654604.5605	615109.3310
10014	11+10.44	23.38	L	654594.6688	615127.0258
10020	10+84.68	43.76	R	654537.8394	615082.9563
10021	11+02.46	32.70	R	654543.2800	615103.1750
10022	11+29.44	31.64	R	654536.5036	615129.3034
10023	11+02.57	52.70	R	654524.1039	615097.4937
10030	13+72.54	1.82	L	654498.2695	615371.7005
10031	13+81.54	1.80	L	654495.6493	615380.3107
10040	13+67.29	33.10	R	654466.3552	615356.5817
10041	13+69.17	33.14	R	654465.7772	615358.3679
10042	13+85.83	50.15	R	654444.6723	615369.4043
10043	13+85.82	62.67	R	654432.6906	615365.7792
10044	13+68.83	50.13	R	654449.6027	615353.1349



- NOTES:**
1. -LANDING AREAS SHALL NOT EXCEED A 2% CROSS SLOPE AND 2% RUNNING SLOPE.
 2. -ALL DETECTABLE WARNING SURFACES MUST BE PLANAR AND FLUSH WITH ADJACENT SURFACES.
 3. -ELEVATIONS SHOWN ARE FOR THE LIMITS OF THE DEPRESSED CURB.
 4. -THE CONTRACTOR SHALL TIE-IN BACK TO THE EXISTING SURFACE AT THE LOCATIONS SHOWN THAT ARE SHOWN AS "MATCH EXISTING" OR "M.E."

 -DESIGNATES PAY LIMITS FOR PEDESTRIAN CONNECTIONS PER DELDOT SPECIFICATION SECTION 705

ADDENDA / REVISIONS	

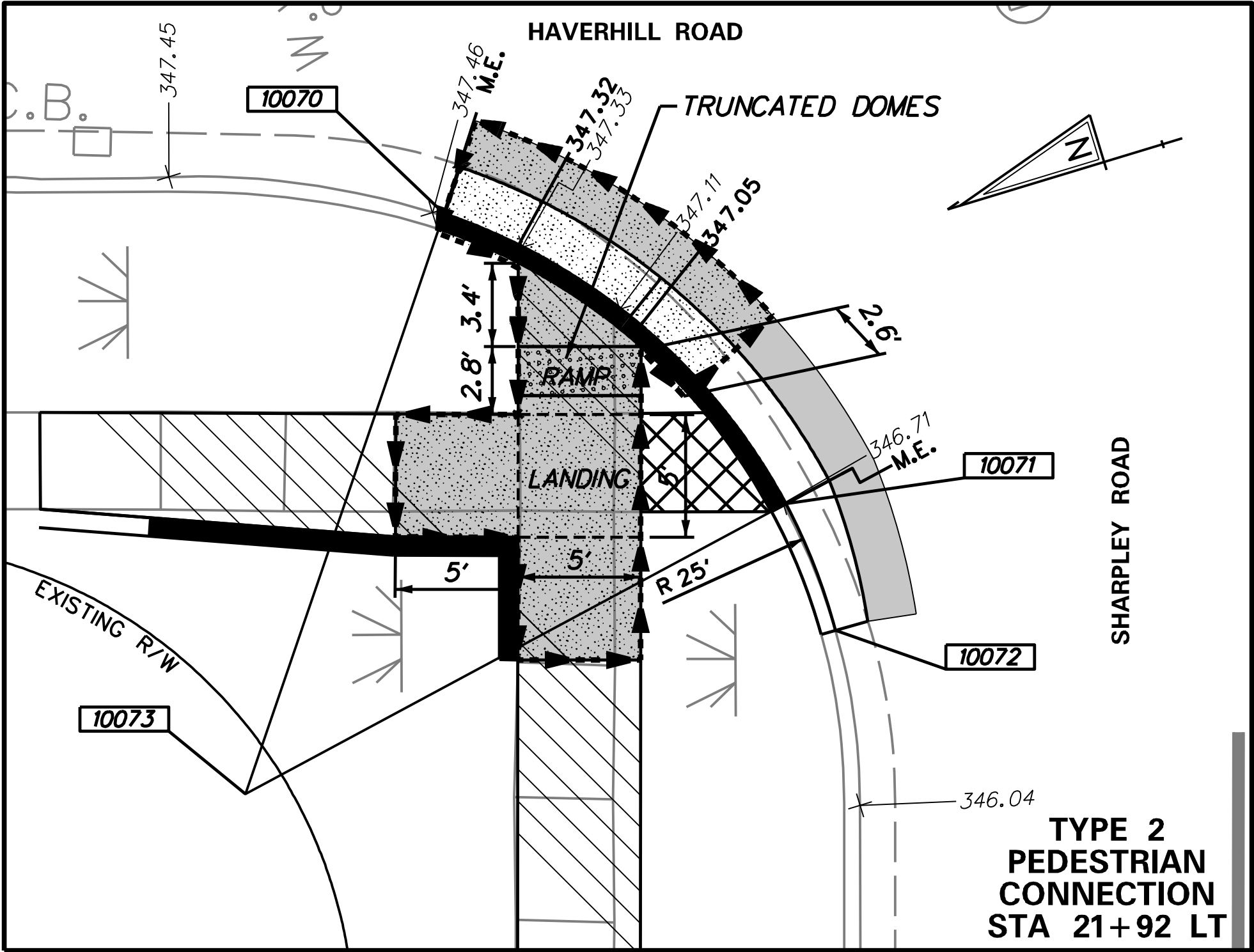
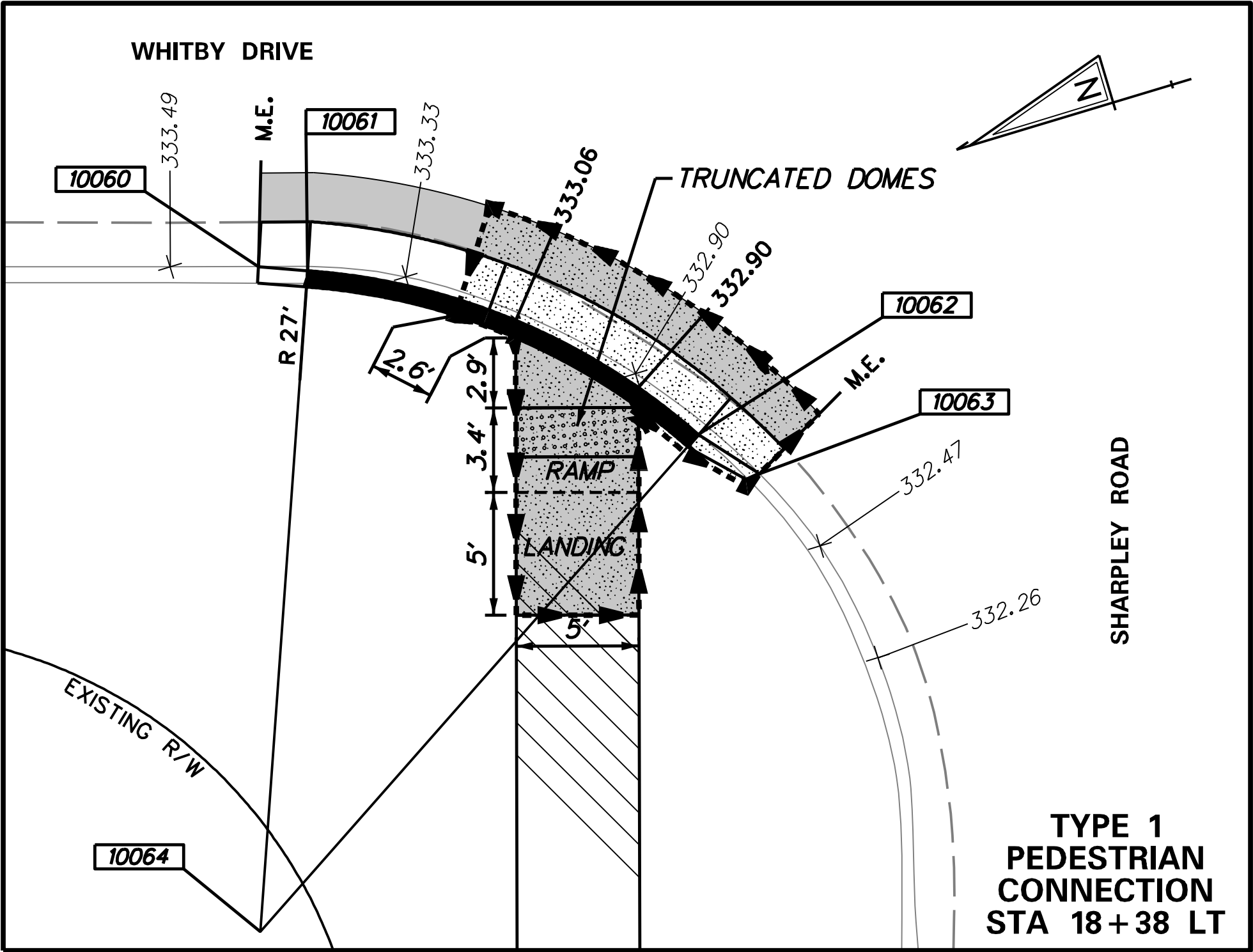
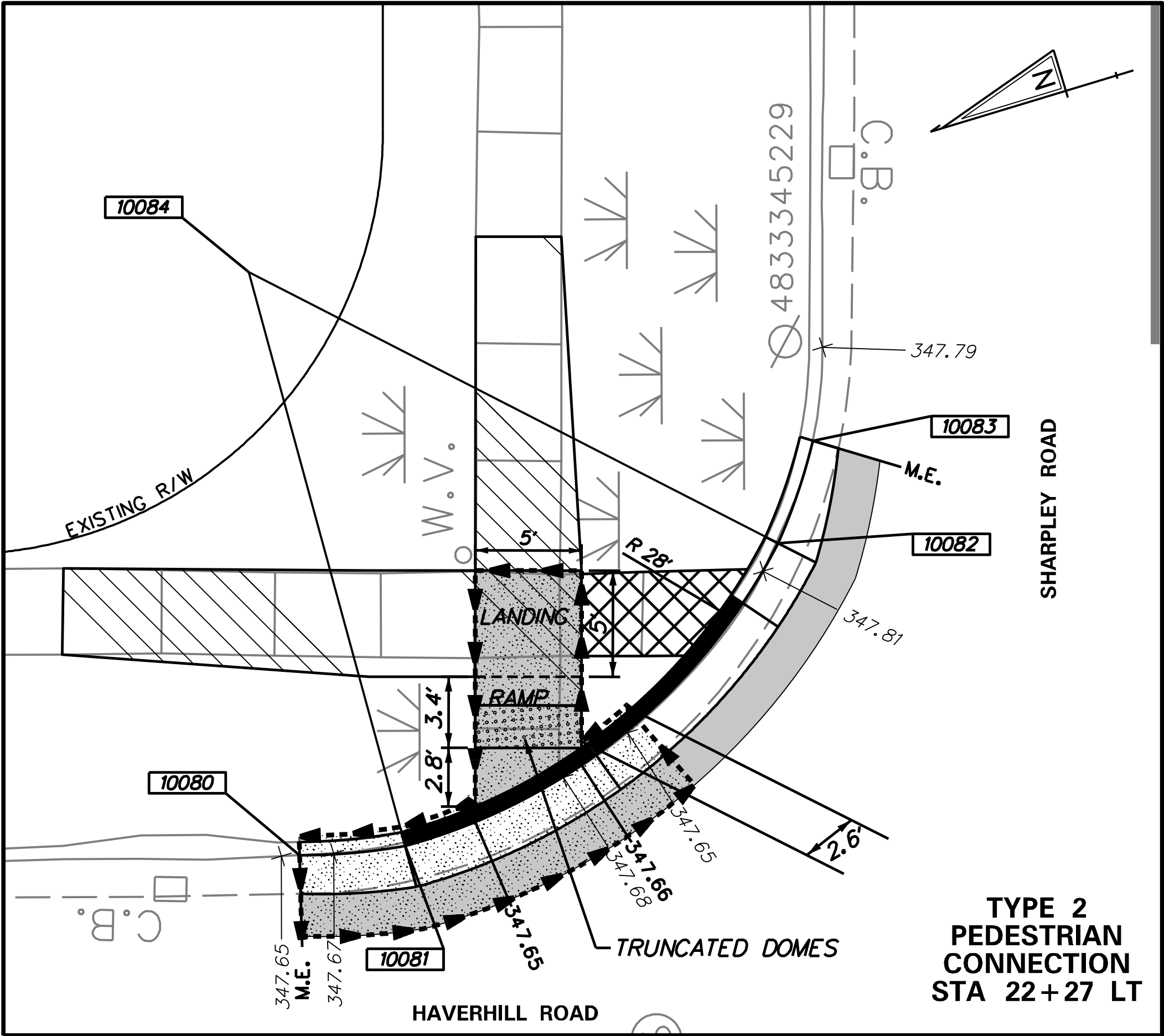
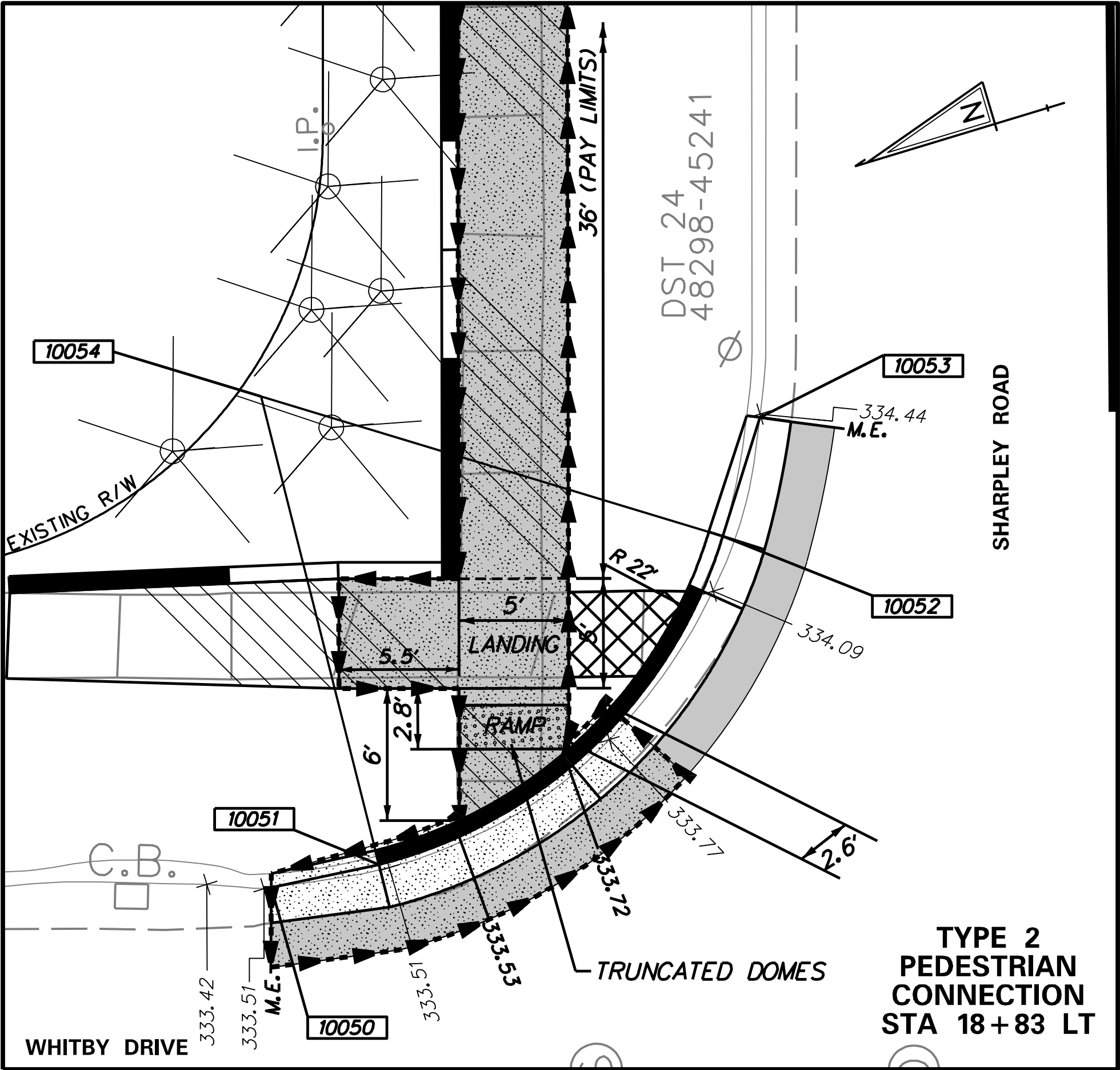


BR 1-022 AND 1-525 ON SHARPLEY ROAD

CONTRACT	BRIDGE NO.
T201807103	
COUNTY	DESIGNED BY: AG
NEW CASTLE	CHECKED BY: WM

**GRADES & GEOMETRICS
SIDEWALK GRADING
DETAILS**

SECTION
UEI
SHEET NO.
43



COORDINATE LIST				
POINT NO.	STATION	OFFSET	NORTHING	EASTING
10050	18+77.97	26.39 L	654375.6934	615862.6560
10051	18+79.00	21.49 L	654370.7048	615862.2316
10052	18+93.95	5.79 L	654351.3526	615872.0030
10053	18+99.37	4.10 L	654348.1654	615876.6987
10054	19+00.34	26.84 L	654369.6575	615884.2067

10060	18+42.24	28.27 L	654387.8208	615828.9980
10061	18+42.07	26.28 L	654385.9616	615828.2588
10062	18+35.37	10.35 L	654372.6512	615817.2396
10063	18+33.77	7.87 L	654370.7367	615814.9935
10064	18+15.14	28.24 L	654395.6190	615803.0451

10070	21+95.71	20.27 L	654277.9867	616165.0697
10071	21+83.88	6.39 L	654268.1248	616149.7350
10072	21+78.72	4.38 L	654267.6904	616144.2131
10073	21+72.08	28.44 L	654292.6350	616144.8105

10080	22+23.20	27.97 L	654277.4089	616193.6124
10081	22+23.64	22.99 L	654272.5242	616192.5890
10082	22+37.86	5.43 L	654251.5947	616201.1260
10083	22+42.68	3.78 L	654248.6243	616205.2679
10084	22+50.66	30.33 L	654271.7348	616220.5779

- NOTES:
- LANDING AREAS SHALL NOT EXCEED A 2% CROSS SLOPE AND 2% RUNNING SLOPE.
 - ALL DETECTABLE WARNING SURFACES MUST BE PLANAR AND FLUSH WITH ADJACENT SURFACES.
 - ELEVATIONS SHOWN ARE FOR THE LIMITS OF THE DEPRESSED CURB.
 - THE CONTRACTOR SHALL TIE-IN BACK TO THE EXISTING SURFACE AT THE LOCATIONS SHOWN THAT ARE SHOWN AS "MATCH EXISTING" OR "M.E."

LEGEND

 -DESIGNATES PAY LIMITS FOR PEDESTRIAN CONNECTIONS PER DELDOT SPECIFICATION SECTION 705

MAINTENANCE OF TRAFFIC NOTES

1. THE FOLLOWING NOTES ARE FOR SIDEWALK AND CURB RAMP CONSTRUCTION ONLY. ADDITIONAL NOTES FOR THE REPLACEMENT OF BRIDGE STRUCTURE BR. 1-525 CAN BE FOUND ON PLAN SHEETS BR-1 TO BR-38.
2. AMERICAN TRAFFIC SAFETY SERVICES ASSOCIATION (ATSSA) CERTIFIED TRAFFIC CONTROL SUPERVISOR REQUIREMENT FOR THIS PROJECT.

(X)	THE CONTRACTOR SHALL NOT BE REQUIRED TO HAVE AN ATSSA SUPERVISOR ASSIGNED TO THIS PROJECT.
()	THE CONTRACTOR SHALL HAVE AN ATSSA SUPERVISOR ASSIGNED TO THIS PROJECT. THE CONTRACTOR'S GENERAL SUPERINTENDENT FOR THIS PROJECT OR ANOTHER ATSSA CERTIFIED MEMBER OF THE CONTRACTOR'S PROJECT STAFF MAY BE THE ATSSA SUPERVISOR. PAYMENT FOR ATSSA SUPERVISOR IS INCIDENTAL TO ITEM 801000.

3. MAINTENANCE OF TRAFFIC DURING LANE CLOSURES SHALL CONFORM TO TYPICAL APPLICATION TA-10,TA-11B,TA-28 AND TA-29 OF THE CURRENT DELAWARE MUTCD. SHOULDER CLOSURES SHALL CONFORM TO TYPICAL APPLICATION TA-11B. ALL SHOULDER CLOSURES SHALL BE REMOVED AT THE END OF EACH WORKDAY. LANE CLOSURES ARE PERMITTED ON SHARPLEY RD, BLACK GATE RD, HAVERHILL RD AND WHITBY RD FROM 9:00AM TO 4:00 PM, MONDAY THROUGH FRIDAY. REFER TO THE LANE CLOSURE SCHEDULE BELOW.

ALLOWABLE HOURS FOR A SINGLE LANE CLOSURE															
	12:00 AM	1:00 AM	2:00 AM	3:00 AM	4:00 AM	5:00 AM	6:00 AM	7:00 AM	8:00 AM	9:00 AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM
Sunday															
Monday															
Tuesday															
Wednesday															
Thursday															
Friday															
Saturday															

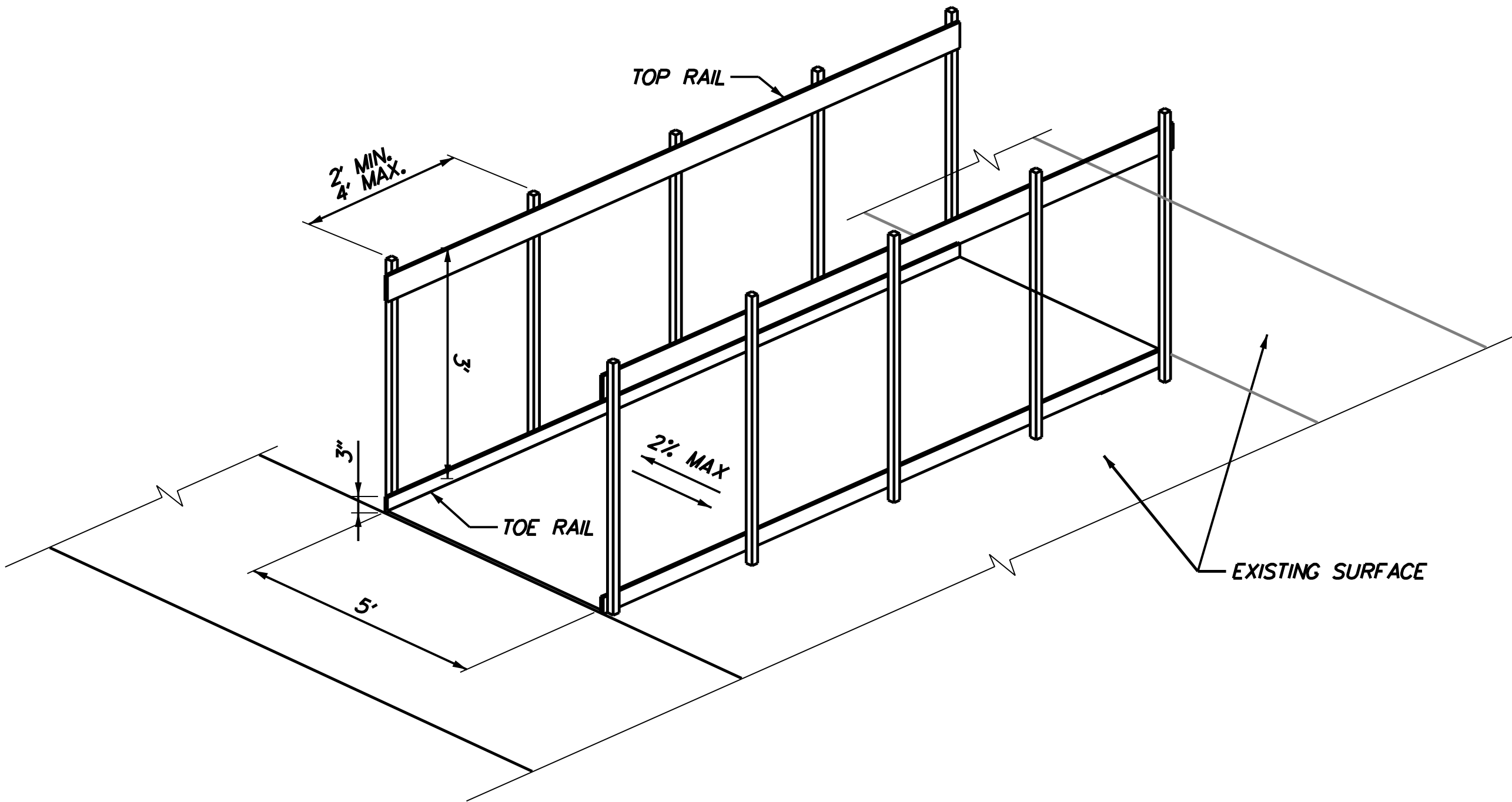
	ONE LANE PERMITTED TO BE CLOSED
	NO TRAVEL LANE CLOSURES PERMITTED

4. ACCEPTABLE MATERIALS FOR TEMPORARY PEDESTRIAN PATHS SHALL INCLUDE CONCRETE, HOT-MIX, COMPACTED MILLINGS OR PLYWOOD WALKWAY STRUCTURE. PLYWOOD WALKWAY STRUCTURES SHALL ALSO INCLUDE DETECTABLE EDGING AND RAILINGS IN ACCORDANCE WITH ADA GUIDELINES AND THE DELAWARE MUTCD. TEMPORARY PEDESTRIAN PATHS SHALL BE INCIDENTAL TO ITEM 801000 UNLESS OTHERWISE SPECIFIED IN THE PLANS. STONE OR GRADED AGGREGATE BASE COURSE SHALL NOT BE USED FOR TEMPORARY PEDESTRIAN PATHS.
5. WORK SHALL BE PERFORMED IN A MANNER THAT WILL REASONABLY PROVIDE THE LEAST PRACTICABLE OBSTRUCTION TO TRAFFIC, CONSISTENT WITH SAFETY STANDARDS AND SHALL COMPLY WITH THE LATEST EDITION OF THE MANUAL TITLED "DELAWARE DEPARTMENT OF TRANSPORTATION MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) FOR STREETS AND HIGHWAYS" HERE AFTER REFERED TO AS THE TRAFFIC CONTROL MANUAL.
6. ALL NECESSARY SIGNS, PAVEMENT MARKINGS AND ROADSIDE APPURTENANCES SHALL BE INSTALLED PRIOR TO THE OPENING/REOPENING OF A ROADWAY OR RAMP. A WALKTHROUGH WITH THE ENGINEER, TRAFFIC SAFETY, TRAFFIC CONSTRUCTION AND OTHER PERSONNEL SHALL OCCUR NO LESS THAN 48 HOURS PRIOR TO THE OPENING/REOPENING OF ANY ROAD OR RAMP.
7. THE USE OF MILLINGS AND GRADED AGGREGATE BASE COURSE (GABC) IN THE TRAVEL WAY, TEMPORARY TRAVEL WAY, HIGH VOLUME ENTRANCES AND ACCESS RAMP FOR THE PURPOSE OF PROVIDING A TEMPORARY ROADWAY SURFACE, POTHOLE REPAIR, TAPERED EDGE FOR UTILITIES, BUTT JOINTS, AND LONGITUDINAL DROP-OFFS (MILLING AND PAVING OPERATIONS) IS PROHIBITED UNLESS IT IS OTHERWISE DESIGNATED TO BE USED IN THE CONTRACT PLANS. USE COLD PATCH, BITUMINOUS CONCRETE, BITUMINOUS CONCRETE WEDGE, OR TAPER MILL AS NOTED IN THE CONTRACT DOCUMENTS OR APPROVED BY THE ENGINEER. PAYMENT FOR COLD PATCH, BITUMINOUS CONCRETE OR BITUMINOUS CONCRETE WEDGE SHALL BE PAID AS NOTED IN THE CONTRACT DOCUMENTS. TAPER MILL BITUMINOUS CONCRETE SHALL BE PAID UNDER THE BITUMINOUS CONCRETE MILLING ITEM.
8. MILLINGS OR GABC SHALL BE USED AT THE FOLLOWING LOCATIONS WHERE ACCESS TO A BUSINESS, RESIDENCE, OR EDGE DROP-OFF NEEDS TO BE MAINTAINED UNLESS OTHERWISE NOTED IN THE PLANS OR DIRECTED BY THE ENGINEER TO USE BITUMINOUS CONCRETE OR COLD PATCH. ALL MILLINGS AND GABC WILL BE ROLLED AND COMPACTED TO HELP PREVENT THE MATERIAL FROM UNRAVELLING:
- a. DRIVEWAYS
 - b. ENTRANCES
 - c. LOW VOLUME ACCESS RAMPS (IDENTIFIED IN THE CONTRACT DOCUMENTS)
 - d. EDGE DROP-OFFS ADJACENT TO LIVE ROADWAY (LANES AND SHOULDER) AND THE PROPOSED ROAD CONSTRUCTION.
 - e. EDGE OF ROADWAY DROP-OFF

MAINTENANCE OF TRAFFIC NOTES (CONT)

GRADING AND MAINTAINING BASE COURSE THAT IS BEING USED FOR ROADWAY WEDGE/FILLET BETWEEN TRAVEL LANES AND PAVEMENT BOX, EDGE OF TRAVELWAY, DRIVEWAY OR ENTRANCE ACCESS SHALL BE INCEDENTAL TO ITEM NO. 801000-MAINTENANCE OF TRAFFIC. THE BASE COURSE MATERIAL SHALL BE PLACED AT NO GREATER THAN THE SLOPE SPECIFIED IN TABLE 6G-1 AND SHALL BE COMPACTED. EXCESS BASE COURSE MATERIAL SHALL BE PUSHED AHEAD AND USED IN THE NEXT SEGMENT AND SHALL BE INCIDENTAL TO THE PARTICULAR BASE COURSE PAY ITEM. NO SEPARATE PAYMENT SHALL BE MADE FOR MILLINGS OR GABC TEMPORARY ROADWAY MATERIAL (TRM) USED TO PROTECT EDGE DROP-OFFS, UNLESS THE MATERIAL IS EVENTUALLY UTILIZED AS PART OF A PERMANENT ROADWAY AT WHICH TIME THE MATERIAL WOULD BE PAID FOR UNDER THE RESPECTIVE CONTRACT MATERIAL ITEM.

VERTICAL DIFFERENCES SHALL BE CORRECTED IN ACCORDANCE WITH TABLE 6G-1 OF THE DELAWARE MUTCD.



TYPICAL TEMPORARY SIDEWALK, TYPE 2 DETAIL

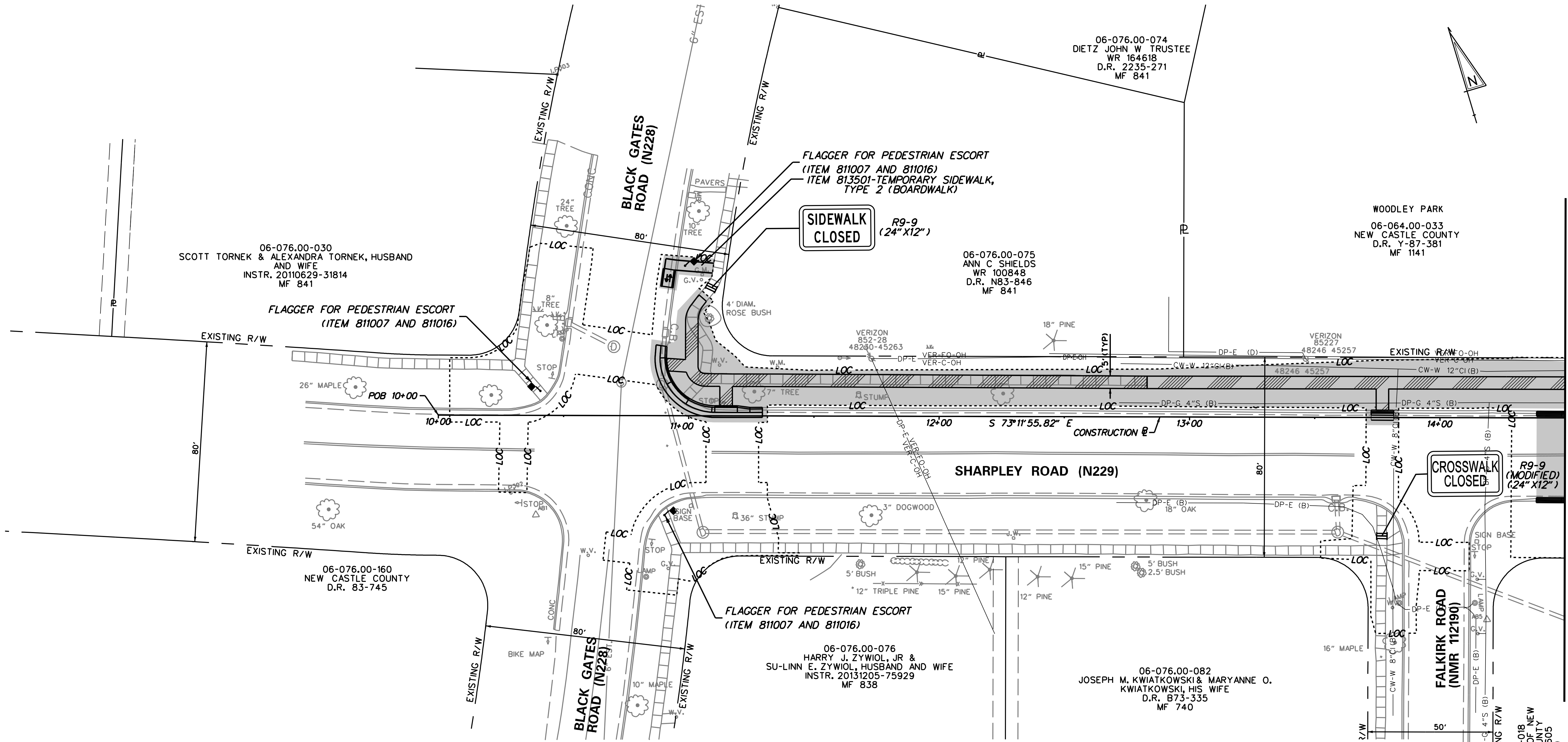
N.T.S.

NOTES:

1. TEMPORARY BOARDWALK TO BE CONSTRUCTED PER SPECIAL PROVISION 813501.
2. TEMPORARY MATERIALS AND METHOD OF CONSTRUCTION TO BE APPROVED BY THE ENGINEER.
3. CHANGES IN SURFACE LEVEL UP TO 1/4 INCH MAY BE VERTICAL WITHOUT EDGE TREATMENT. CHANGES IN SURFACE LEVEL GREATER THAN 1/4 INCH MUST USE A RAMP.
4. TEMPORARY SURFACES MUST BE STABLE AND SLIP RESISTANT.

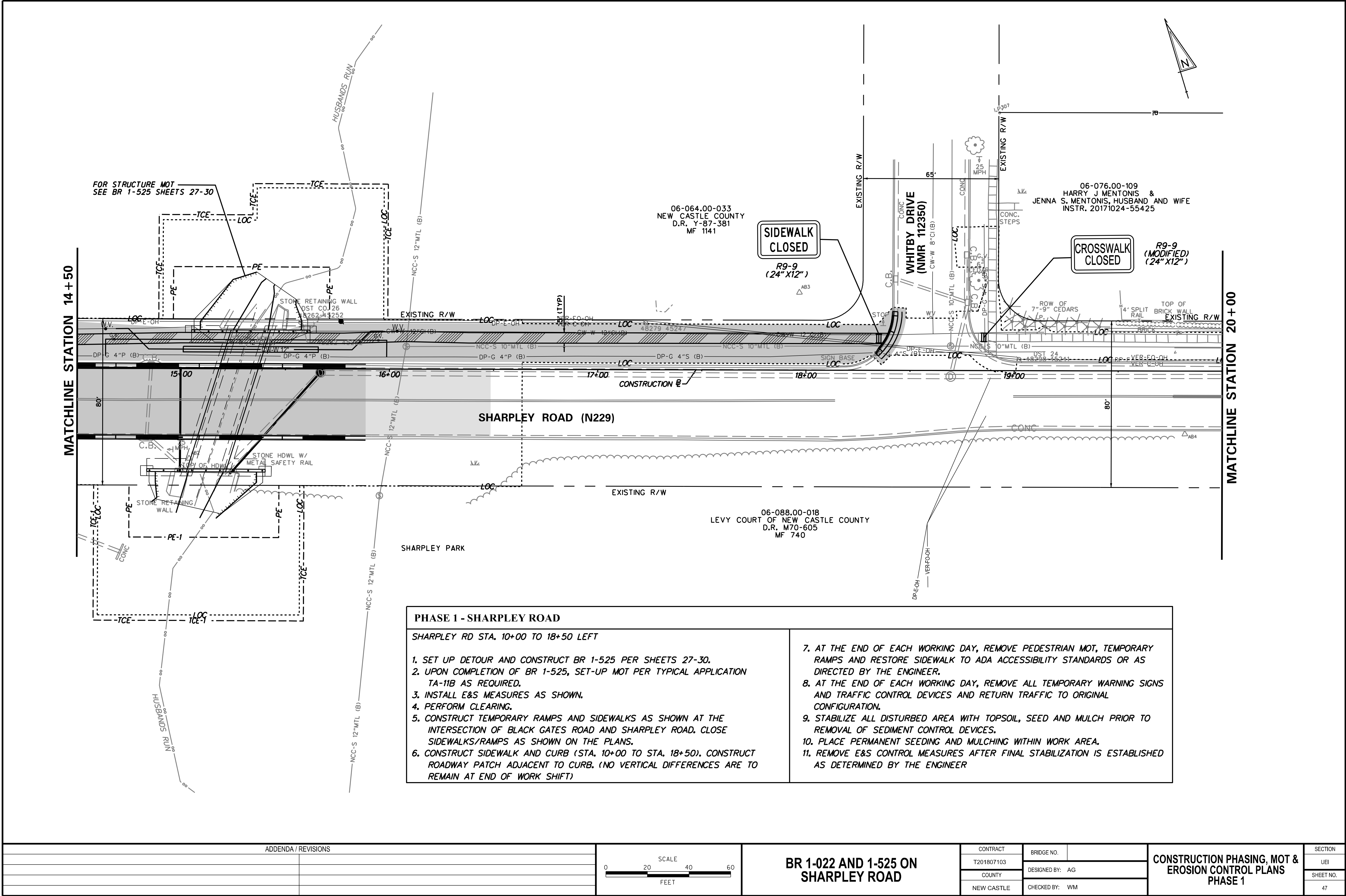
CONSTRUCTION PHASING & M.O.T	
	BARRICADE, TYPE 3
	CONCRETE SAFETY BARRIER - PORTABLE
	CONSTRUCTION SAFETY FENCE / LENGTH
	CONSTRUCTION SAFETY FENCE
	CONSTRUCTION WARNING SIGN LOCATION
	CONSTRUCTION WARNING SIGN
	CRASH CUSHION ARRAY
	DRUM - TRAFFIC CONTROL
	FLAGGER LOCATION
	PHASING TRAFFIC FLOW ARROW
	TEMPORARY CONSTRUCTION
	TEMPORARY PAVEMENT MARKING ARROW
	TRUCK WITH MOUNTED ATTENUATOR
	WORK AREA - ACTIVE PHASE
	TEMPORARY CURB RAMP

ADDENDA / REVISIONS		NOT TO SCALE	BR 1-022 AND 1-525 ON SHARPLEY ROAD	CONTRACT	BRIDGE NO.	CONSTRUCTION PHASING, MOT & EROSION CONTROL PLANS	SECTION
				T201807103			UEI
				COUNTY	DESIGNED BY: AG		SHEET NO.
				NEW CASTLE	CHECKED BY: WM		45

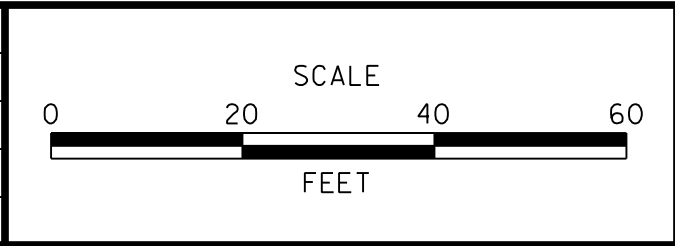


PHASE 1 - SHARPLEY ROAD	
SHARPLEY RD STA. 10+00 TO 18+50 LEFT	
1. SET UP DETOUR AND CONSTRUCT BR 1-525 PER SHEETS 27-30.	7. AT THE END OF EACH WORKING DAY, REMOVE PEDESTRIAN MOT, TEMPORARY RAMPS AND RESTORE SIDEWALK TO ADA ACCESSIBILITY STANDARDS OR AS DIRECTED BY THE ENGINEER.
2. UPON COMPLETION OF BR 1-525, SET-UP MOT PER TYPICAL APPLICATION TA-11B AS REQUIRED.	8. AT THE END OF EACH WORKING DAY, REMOVE ALL TEMPORARY WARNING SIGNS AND TRAFFIC CONTROL DEVICES AND RETURN TRAFFIC TO ORIGINAL CONFIGURATION.
3. INSTALL E&S MEASURES AS SHOWN.	9. STABILIZE ALL DISTURBED AREA WITH TOPSOIL, SEED AND MULCH PRIOR TO REMOVAL OF SEDIMENT CONTROL DEVICES.
4. PERFORM CLEARING.	10. PLACE PERMANENT SEEDING AND MULCHING WITHIN WORK AREA.
5. CONSTRUCT TEMPORARY RAMPS AND SIDEWALKS AS SHOWN AT THE INTERSECTION OF BLACK GATES ROAD AND SHARPLEY ROAD. CLOSE SIDEWALKS/RAMPS AS SHOWN ON THE PLANS.	11. REMOVE E&S CONTROL MEASURES AFTER FINAL STABILIZATION IS ESTABLISHED AS DETERMINED BY THE ENGINEER
6. CONSTRUCT SIDEWALK AND CURB (STA. 10+00 TO STA. 18+50). CONSTRUCT ROADWAY PATCH ADJACENT TO CURB. (NO VERTICAL DIFFERENCES ARE TO REMAIN AT END OF WORK SHIFT)	

ADDENDA / REVISIONS		SCALE 0 20 40 60 FEET	BR 1-022 AND 1-525 ON SHARPLEY ROAD	CONTRACT	BRIDGE NO.	CONSTRUCTION PHASING, MOT & EROSION CONTROL PLANS PHASE 1	SECTION
				T201807103			UEI
				COUNTY	DESIGNED BY: AG		SHEET NO.
				NEW CASTLE	CHECKED BY: WM		46



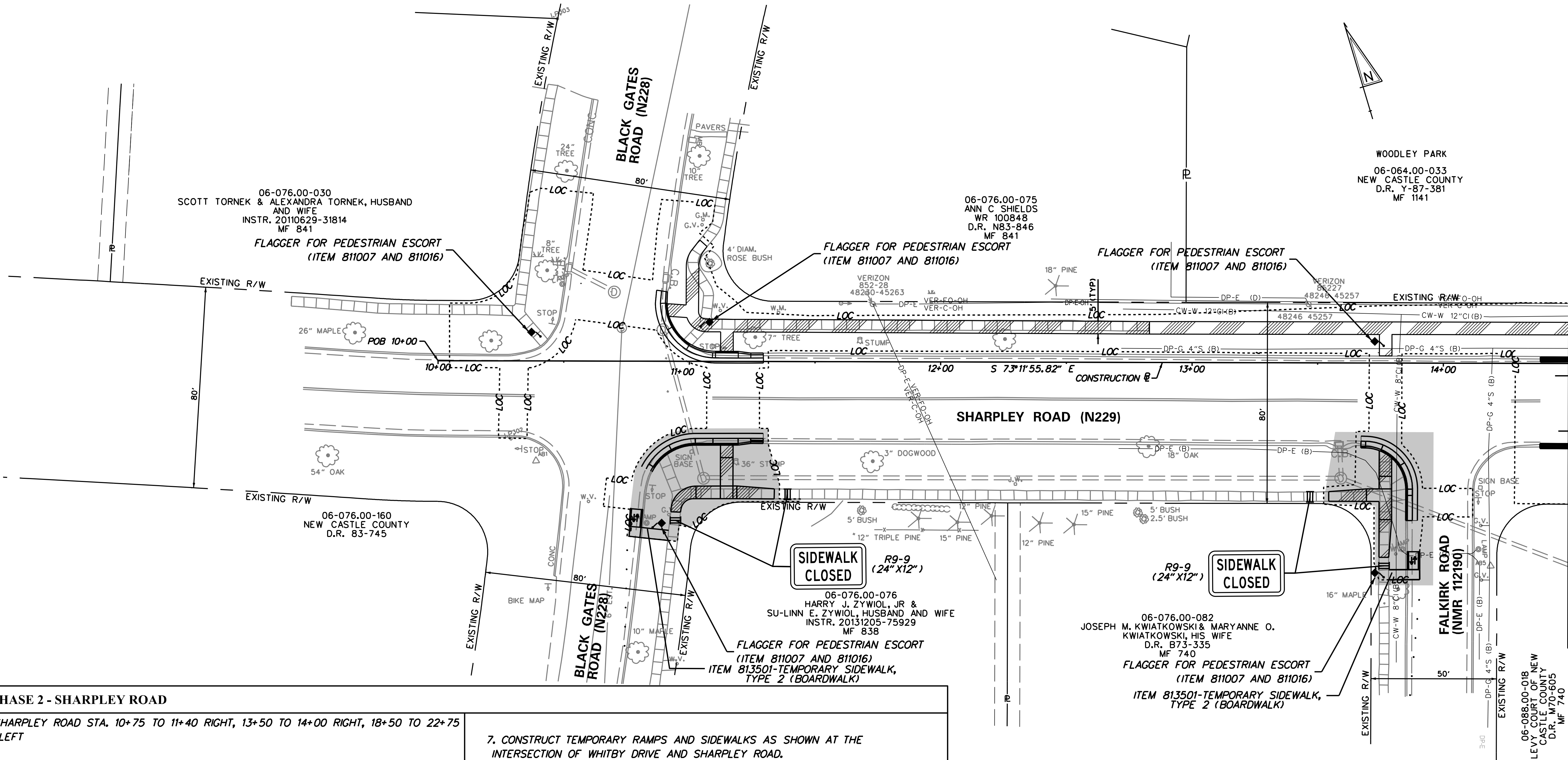
ADDENDA / REVISIONS	



BR 1-022 AND 1-525 ON SHARPLEY ROAD	
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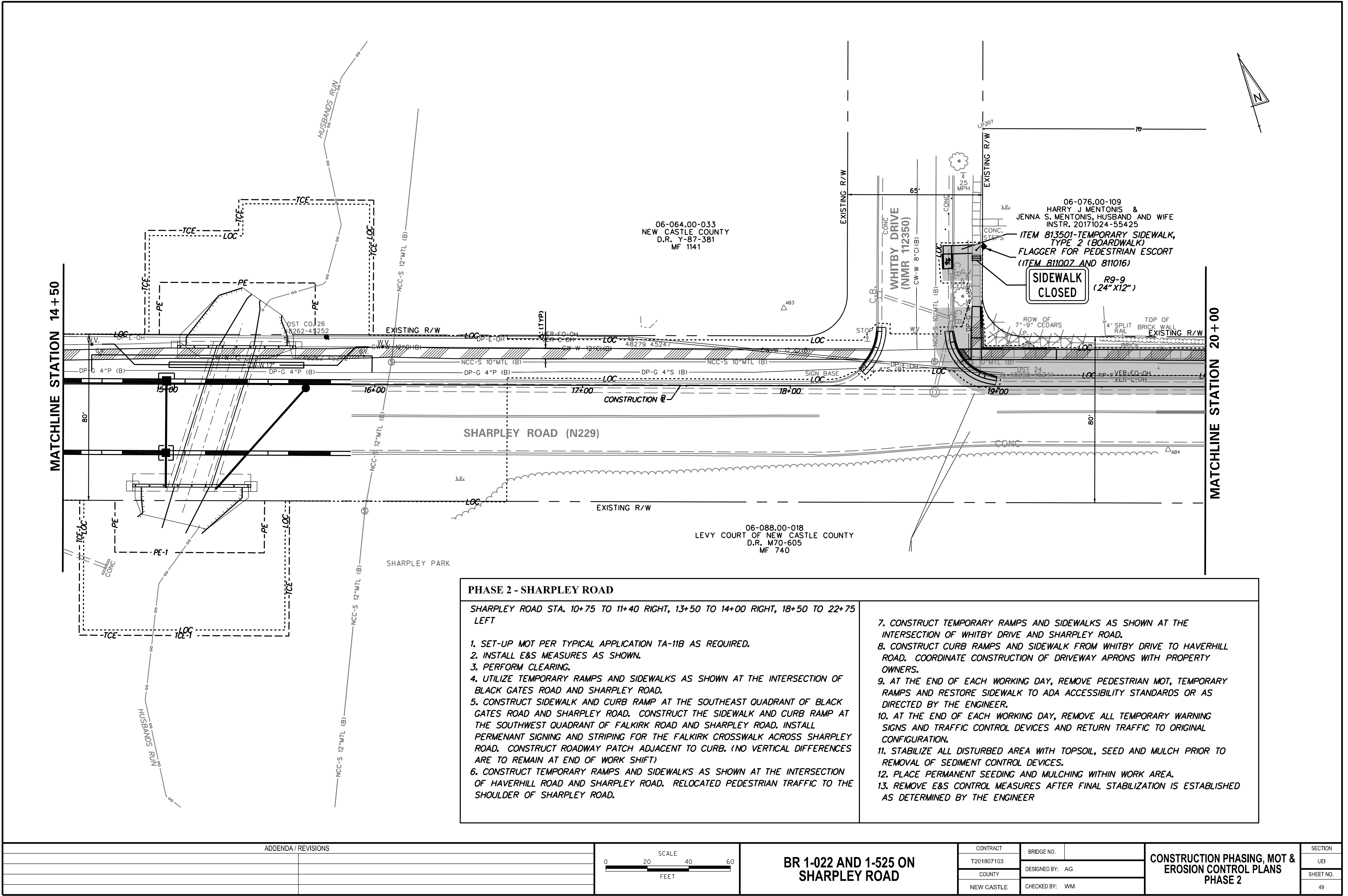
CONTRACT	BRIDGE NO.
T201807103	
COUNTY	DESIGNED BY: AG
NEW CASTLE	CHECKED BY: WM

CONSTRUCTION PHASING, MOT & EROSION CONTROL PLANS PHASE 1	SECTION
	UEI
	SHEET NO.
	47



PHASE 2 - SHARPLEY ROAD	
SHARPLEY ROAD STA. 10+75 TO 11+40 RIGHT, 13+50 TO 14+00 RIGHT, 18+50 TO 22+75 LEFT	
1. SET-UP MOT PER TYPICAL APPLICATION TA-11B AS REQUIRED.	
2. INSTALL E&S MEASURES AS SHOWN.	
3. PERFORM CLEARING.	
4. UTILIZE TEMPORARY RAMPS AND SIDEWALKS AS SHOWN AT THE INTERSECTION OF BLACK GATES ROAD AND SHARPLEY ROAD.	
5. CONSTRUCT SIDEWALK AND CURB RAMP AT THE SOUTHEAST QUADRANT OF BLACK GATES ROAD AND SHARPLEY ROAD. CONSTRUCT THE SIDEWALK AND CURB RAMP AT THE SOUTHWEST QUADRANT OF FALKIRK ROAD AND SHARPLEY ROAD. INSTALL PERMANENT SIGNING AND STRIPING FOR THE FALKIRK CROSSWALK ACROSS SHARPLEY ROAD. CONSTRUCT ROADWAY PATCH ADJACENT TO CURB. (NO VERTICAL DIFFERENCES ARE TO REMAIN AT END OF WORK SHIFT)	
6. CONSTRUCT TEMPORARY RAMPS AND SIDEWALKS AS SHOWN AT THE INTERSECTION OF HAVERHILL ROAD AND SHARPLEY ROAD. RELOCATED PEDESTRIAN TRAFFIC TO THE SHOULDER OF SHARPLEY ROAD.	
7. CONSTRUCT TEMPORARY RAMPS AND SIDEWALKS AS SHOWN AT THE INTERSECTION OF WHITBY DRIVE AND SHARPLEY ROAD.	
8. CONSTRUCT CURB RAMPS AND SIDEWALK FROM WHITBY DRIVE TO HAVERHILL ROAD. COORDINATE CONSTRUCTION OF DRIVEWAY APRONS WITH PROPERTY OWNERS.	
9. AT THE END OF EACH WORKING DAY, REMOVE PEDESTRIAN MOT, TEMPORARY RAMPS AND RESTORE SIDEWALK TO ADA ACCESSIBILITY STANDARDS OR AS DIRECTED BY THE ENGINEER.	
10. AT THE END OF EACH WORKING DAY, REMOVE ALL TEMPORARY WARNING SIGNS AND TRAFFIC CONTROL DEVICES AND RETURN TRAFFIC TO ORIGINAL CONFIGURATION.	
11. STABILIZE ALL DISTURBED AREA WITH TOPSOIL, SEED AND MULCH PRIOR TO REMOVAL OF SEDIMENT CONTROL DEVICES.	
12. PLACE PERMANENT SEEDING AND MULCHING WITHIN WORK AREA.	
13. REMOVE E&S CONTROL MEASURES AFTER FINAL STABILIZATION IS ESTABLISHED AS DETERMINED BY THE ENGINEER	

ADDENDA / REVISIONS		0 20 40 60 SCALE FEET	BR 1-022 AND 1-525 ON SHARPLEY ROAD	CONTRACT	BRIDGE NO.	CONSTRUCTION PHASING, MOT & EROSION CONTROL PLANS PHASE 2	SECTION
				T201807103			UEI
				COUNTY	DESIGNED BY: AG		SHEET NO.
				NEW CASTLE	CHECKED BY: WM		48



PHASE 2 - SHARPLEY ROAD

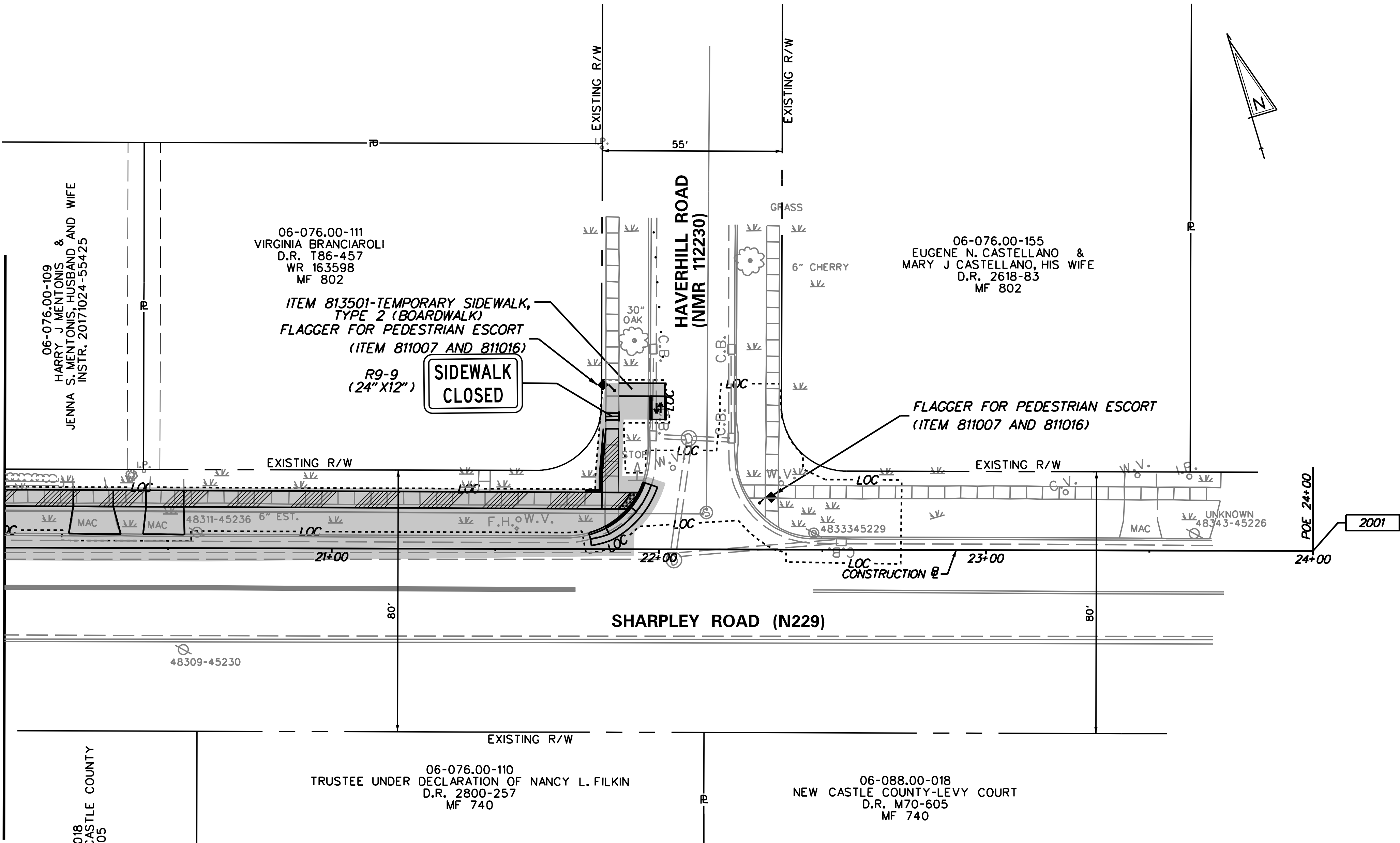
SHARPLEY ROAD STA. 10+75 TO 11+40 RIGHT, 13+50 TO 14+00 RIGHT, 18+50 TO 22+75 LEFT

1. SET-UP MOT PER TYPICAL APPLICATION TA-11B AS REQUIRED.
2. INSTALL E&S MEASURES AS SHOWN.
3. PERFORM CLEARING.
4. UTILIZE TEMPORARY RAMPS AND SIDEWALKS AS SHOWN AT THE INTERSECTION OF BLACK GATES ROAD AND SHARPLEY ROAD.
5. CONSTRUCT SIDEWALK AND CURB RAMP AT THE SOUTHEAST QUADRANT OF BLACK GATES ROAD AND SHARPLEY ROAD. CONSTRUCT THE SIDEWALK AND CURB RAMP AT THE SOUTHWEST QUADRANT OF FALKIRK ROAD AND SHARPLEY ROAD. INSTALL PERMENANT SIGNING AND STRIPING FOR THE FALKIRK CROSSWALK ACROSS SHARPLEY ROAD. CONSTRUCT ROADWAY PATCH ADJACENT TO CURB. (NO VERTICAL DIFFERENCES ARE TO REMAIN AT END OF WORK SHIFT)
6. CONSTRUCT TEMPORARY RAMPS AND SIDEWALKS AS SHOWN AT THE INTERSECTION OF HAVERHILL ROAD AND SHARPLEY ROAD. RELOCATED PEDESTRIAN TRAFFIC TO THE SHOULDER OF SHARPLEY ROAD.

7. CONSTRUCT TEMPORARY RAMPS AND SIDEWALKS AS SHOWN AT THE INTERSECTION OF WHITBY DRIVE AND SHARPLEY ROAD.
8. CONSTRUCT CURB RAMPS AND SIDEWALK FROM WHITBY DRIVE TO HAVERHILL ROAD. COORDINATE CONSTRUCTION OF DRIVEWAY APRONS WITH PROPERTY OWNERS.
9. AT THE END OF EACH WORKING DAY, REMOVE PEDESTRIAN MOT, TEMPORARY RAMPS AND RESTORE SIDEWALK TO ADA ACCESSIBILITY STANDARDS OR AS DIRECTED BY THE ENGINEER.
10. AT THE END OF EACH WORKING DAY, REMOVE ALL TEMPORARY WARNING SIGNS AND TRAFFIC CONTROL DEVICES AND RETURN TRAFFIC TO ORIGINAL CONFIGURATION.
11. STABILIZE ALL DISTURBED AREA WITH TOPSOIL, SEED AND MULCH PRIOR TO REMOVAL OF SEDIMENT CONTROL DEVICES.
12. PLACE PERMANENT SEEDING AND MULCHING WITHIN WORK AREA.
13. REMOVE E&S CONTROL MEASURES AFTER FINAL STABILIZATION IS ESTABLISHED AS DETERMINED BY THE ENGINEER

ADDENDA / REVISIONS		<div>020425</div> <div>SCALE</div> <div>020425</div> <div>FEET</div>	BR 1-022 AND 1-525 ON SHARPLEY ROAD	CONTRACT	BRIDGE NO.	CONSTRUCTION PHASING, MOT & EROSION CONTROL PLANS PHASE 2	SECTION
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				COUNTY	DESIGNED BY: AG		SHEET NO.
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MATCHLINE STATION 20+00



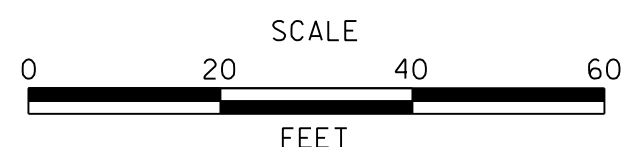
PHASE 2 - SHARPLEY ROAD

SHARPLEY ROAD STA. 10+75 TO 11+40 RIGHT, 13+50 TO 14+00 RIGHT, 18+50 TO 22+75 LEFT

1. SET-UP MOT PER TYPICAL APPLICATION TA-11B AS REQUIRED.
2. INSTALL E&S MEASURES AS SHOWN.
3. PERFORM CLEARING.
4. UTILIZE TEMPORARY RAMPS AND SIDEWALKS AS SHOWN AT THE INTERSECTION OF BLACK GATES ROAD AND SHARPLEY ROAD.
5. CONSTRUCT SIDEWALK AND CURB RAMP AT THE SOUTHEAST QUADRANT OF BLACK GATES ROAD AND SHARPLEY ROAD. CONSTRUCT THE SIDEWALK AND CURB RAMP AT THE SOUTHWEST QUADRANT OF FALKIRK ROAD AND SHARPLEY ROAD. INSTALL PERMENANT SIGNING AND STRIPING FOR THE FALKIRK CROSSWALK ACROSS SHARPLEY ROAD. CONSTRUCT ROADWAY PATCH ADJACENT TO CURB. (NO VERTICAL DIFFERENCES ARE TO REMAIN AT END OF WORK SHIFT)
6. CONSTRUCT TEMPORARY RAMPS AND SIDEWALKS AS SHOWN AT THE INTERSECTION OF HAVERHILL ROAD AND SHARPLEY ROAD. RELOCATED PEDESTRIAN TRAFFIC TO THE SHOULDER OF SHARPLEY ROAD.

7. CONSTRUCT TEMPORARY RAMPS AND SIDEWALKS AS SHOWN AT THE INTERSECTION OF WHITBY DRIVE AND SHARPLEY ROAD.
8. CONSTRUCT CURB RAMPS AND SIDEWALK FROM WHITBY DRIVE TO HAVERHILL ROAD. COORDINATE CONSTRUCTION OF DRIVEWAY APRONS WITH PROPERTY OWNERS.
9. AT THE END OF EACH WORKING DAY, REMOVE PEDESTRIAN MOT, TEMPORARY RAMPS AND RESTORE SIDEWALK TO ADA ACCESSIBILITY STANDARDS OR AS DIRECTED BY THE ENGINEER.
10. AT THE END OF EACH WORKING DAY, REMOVE ALL TEMPORARY WARNING SIGNS AND TRAFFIC CONTROL DEVICES AND RETURN TRAFFIC TO ORIGINAL CONFIGURATION.
11. STABILIZE ALL DISTURBED AREA WITH TOPSOIL, SEED AND MULCH PRIOR TO REMOVAL OF SEDIMENT CONTROL DEVICES.
12. PLACE PERMANENT SEEDING AND MULCHING WITHIN WORK AREA.
13. REMOVE E&S CONTROL MEASURES AFTER FINAL STABILIZATION IS ESTABLISHED AS DETERMINED BY THE ENGINEER

ADDENDA / REVISIONS



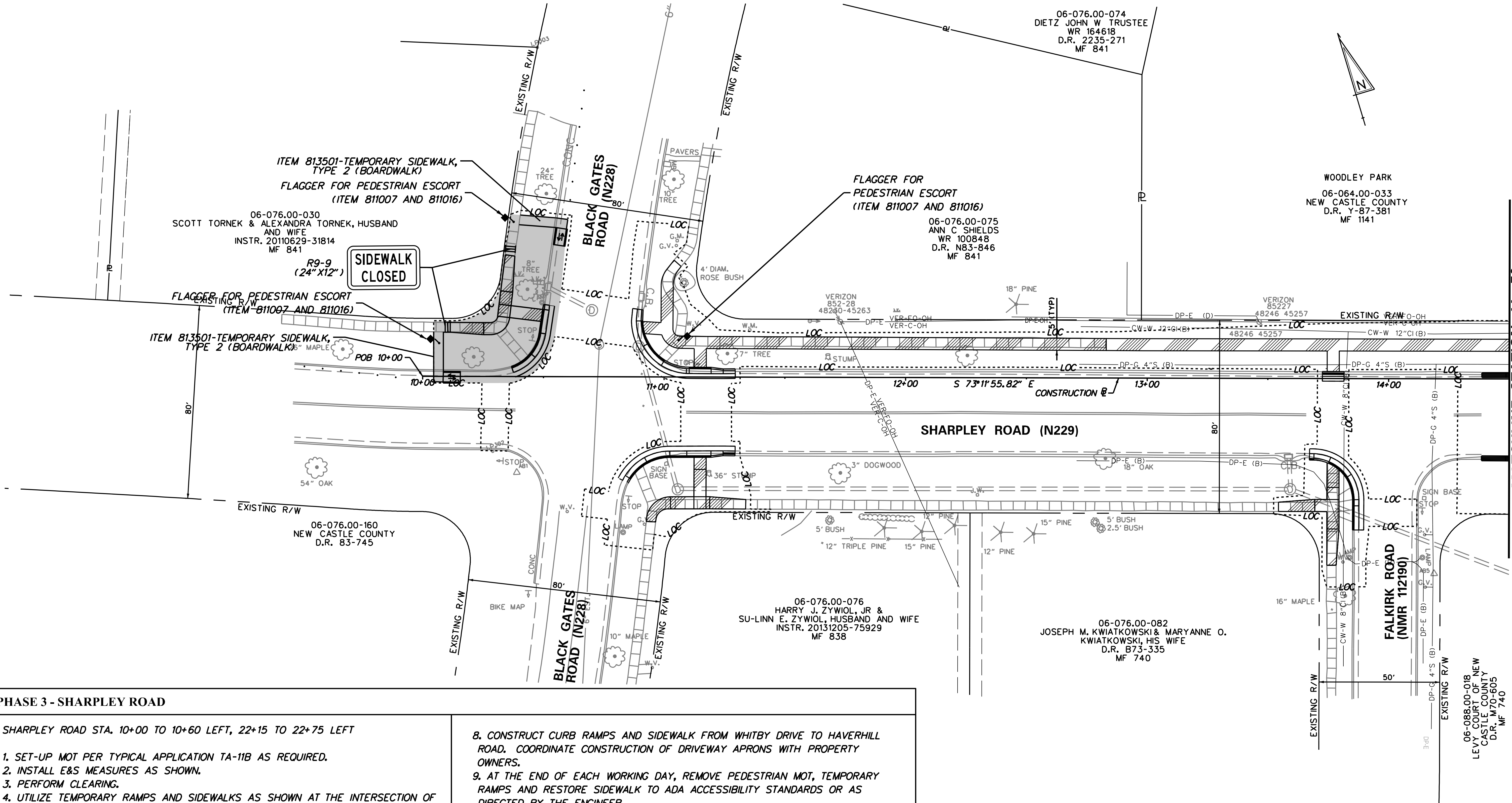
BR 1-022 AND 1-525 ON
SHARPLEY ROAD

CONTRACT
T201807103
COUNTY
NEW CASTLE

BRIDGE NO.
DESIGNED BY: AG
CHECKED BY: WM

CONSTRUCTION PHASING, MOT &
EROSION CONTROL PLANS
PHASE 2

SECTION
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SHEET NO.
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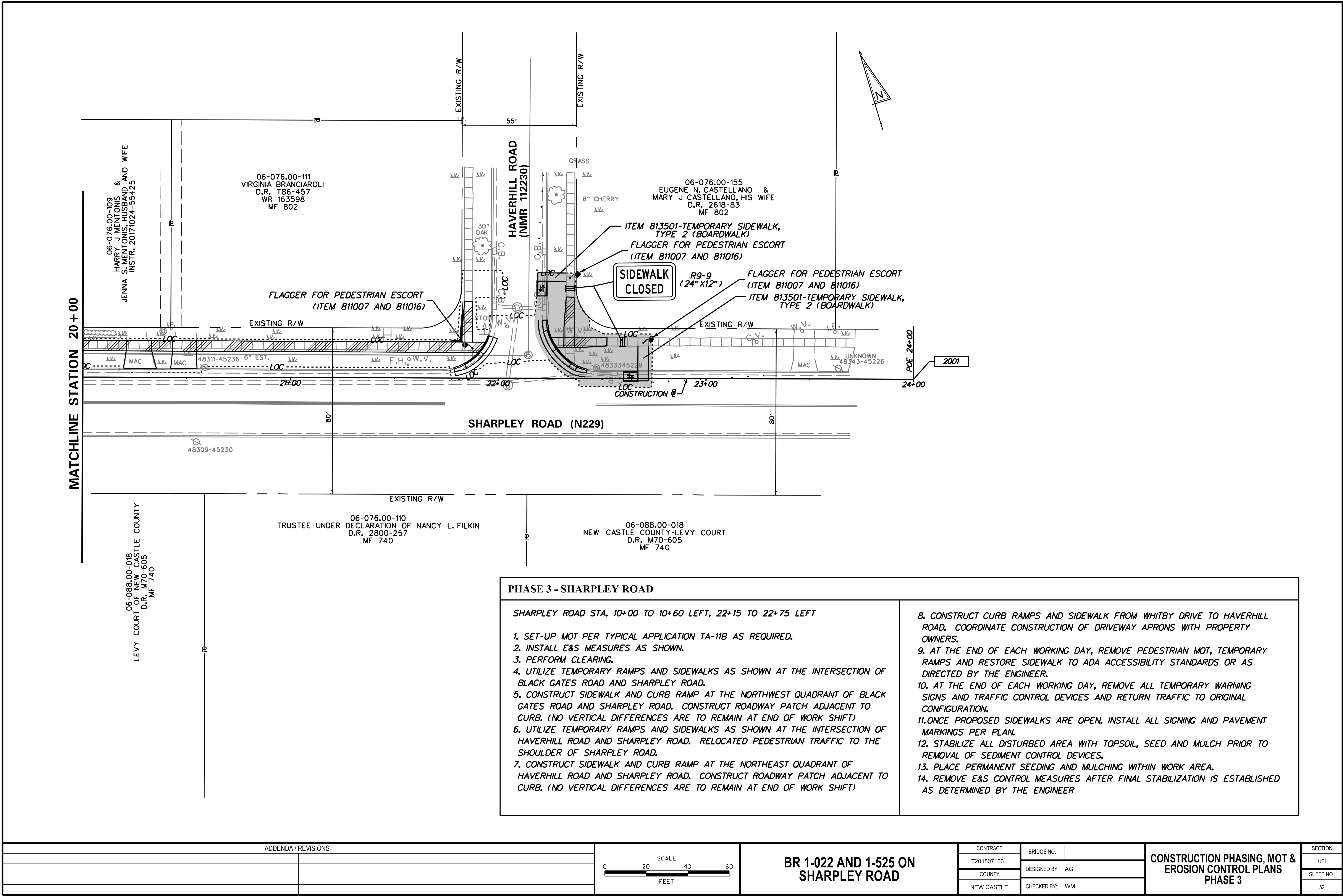
PHASE 3 - SHARPLEY ROAD

SHARPLEY ROAD STA. 10+00 TO 10+60 LEFT, 22+15 TO 22+75 LEFT

1. SET-UP MOT PER TYPICAL APPLICATION TA-11B AS REQUIRED.
2. INSTALL E&S MEASURES AS SHOWN.
3. PERFORM CLEARING.
4. UTILIZE TEMPORARY RAMPS AND SIDEWALKS AS SHOWN AT THE INTERSECTION OF BLACK GATES ROAD AND SHARPLEY ROAD.
5. CONSTRUCT SIDEWALK AND CURB RAMP AT THE NORTHWEST QUADRANT OF BLACK GATES ROAD AND SHARPLEY ROAD. CONSTRUCT ROADWAY PATCH ADJACENT TO CURB. (NO VERTICAL DIFFERENCES ARE TO REMAIN AT END OF WORK SHIFT)
6. UTILIZE TEMPORARY RAMPS AND SIDEWALKS AS SHOWN AT THE INTERSECTION OF HAVERHILL ROAD AND SHARPLEY ROAD. RELOCATED PEDESTRIAN TRAFFIC TO THE SHOULDER OF SHARPLEY ROAD.
7. CONSTRUCT SIDEWALK AND CURB RAMP AT THE NORTHEAST QUADRANT OF HAVERHILL ROAD AND SHARPLEY ROAD. CONSTRUCT ROADWAY PATCH ADJACENT TO CURB. (NO VERTICAL DIFFERENCES ARE TO REMAIN AT END OF WORK SHIFT)

8. CONSTRUCT CURB RAMPS AND SIDEWALK FROM WHITBY DRIVE TO HAVERHILL ROAD. COORDINATE CONSTRUCTION OF DRIVEWAY APRONS WITH PROPERTY OWNERS.
9. AT THE END OF EACH WORKING DAY, REMOVE PEDESTRIAN MOT, TEMPORARY RAMPS AND RESTORE SIDEWALK TO ADA ACCESSIBILITY STANDARDS OR AS DIRECTED BY THE ENGINEER.
10. AT THE END OF EACH WORKING DAY, REMOVE ALL TEMPORARY WARNING SIGNS AND TRAFFIC CONTROL DEVICES AND RETURN TRAFFIC TO ORIGINAL CONFIGURATION.
11. ONCE PROPOSED SIDEWALKS ARE OPEN. INSTALL ALL SIGNING AND PAVEMENT MARKINGS PER PLAN.
12. STABILIZE ALL DISTURBED AREA WITH TOPSOIL, SEED AND MULCH PRIOR TO REMOVAL OF SEDIMENT CONTROL DEVICES.
13. PLACE PERMANENT SEEDING AND MULCHING WITHIN WORK AREA.
14. REMOVE E&S CONTROL MEASURES AFTER FINAL STABILIZATION IS ESTABLISHED AS DETERMINED BY THE ENGINEER

ADDENDA / REVISIONS		<div>SCALE</div> <div>0204060</div> <div>FEET</div>	BR 1-022 AND 1-525 ON SHARPLEY ROAD		CONTRACT	BRIDGE NO.	CONSTRUCTION PHASING, MOT & EROSION CONTROL PLANS PHASE 3	SECTION
					T201807103			UEI
					COUNTY	DESIGNED BY: AG		SHEET NO.
					NEW CASTLE	CHECKED BY: WM		51



PHASE 3 - SHARPLEY ROAD

SHARPLEY ROAD STA. 10+00 TO 10+60 LEFT, 22+15 TO 22+75 LEFT

1. SET-UP MOT PER TYPICAL APPLICATION TA-11B AS REQUIRED.

2. INSTALL E&S MEASURES AS SHOWN.

3. PERFORM CLEARING.

4. UTILIZE TEMPORARY RAMPS AND SIDEWALKS AS SHOWN AT THE INTERSECTION OF BLACK GATES ROAD AND SHARPLEY ROAD.

5. CONSTRUCT SIDEWALK AND CURB RAMP AT THE NORTHWEST QUADRANT OF BLACK GATES ROAD AND SHARPLEY ROAD. CONSTRUCT ROADWAY PATCH ADJACENT TO CURB. (NO VERTICAL DIFFERENCES ARE TO REMAIN AT END OF WORK SHIFT)

6. UTILIZE TEMPORARY RAMPS AND SIDEWALKS AS SHOWN AT THE INTERSECTION OF HAVERHILL ROAD AND SHARPLEY ROAD. RELOCATED PEDESTRIAN TRAFFIC TO THE SHOULDER OF SHARPLEY ROAD.

7. CONSTRUCT SIDEWALK AND CURB RAMP AT THE NORTHEAST QUADRANT OF HAVERHILL ROAD AND SHARPLEY ROAD. CONSTRUCT ROADWAY PATCH ADJACENT TO CURB. (NO VERTICAL DIFFERENCES ARE TO REMAIN AT END OF WORK SHIFT)

8. CONSTRUCT CURB RAMPS AND SIDEWALK FROM WHITBY DRIVE TO HAVERHILL ROAD. COORDINATE CONSTRUCTION OF DRIVEWAY APRONS WITH PROPERTY OWNERS.

9. AT THE END OF EACH WORKING DAY, REMOVE PEDESTRIAN MOT, TEMPORARY RAMPS AND RESTORE SIDEWALK TO ADA ACCESSIBILITY STANDARDS OR AS DIRECTED BY THE ENGINEER.

10. AT THE END OF EACH WORKING DAY, REMOVE ALL TEMPORARY WARNING SIGNS AND TRAFFIC CONTROL DEVICES AND RETURN TRAFFIC TO ORIGINAL CONFIGURATION.

11.ONCE PROPOSED SIDEWALKS ARE OPEN, INSTALL ALL SIGNING AND PAVEMENT MARKINGS PER PLAN.

12. STABILIZE ALL DISTURBED AREA WITH TOPSOIL, SEED AND MULCH PRIOR TO REMOVAL OF SEDIMENT CONTROL DEVICES.

13. PLACE PERMANENT SEEDING AND MULCHING WITHIN WORK AREA.

14. REMOVE E&S CONTROL MEASURES AFTER FINAL STABILIZATION IS ESTABLISHED AS DETERMINED BY THE ENGINEER

ADDENDA / REVISIONS		<div>SCALE</div> <div>0204060</div> <div>FEET</div>	BR 1-022 AND 1-525 ON SHARPLEY ROAD	CONTRACT	BRIDGE NO.	CONSTRUCTION PHASING, MOT & EROSION CONTROL PLANS PHASE 3	SECTION
	T201807103				UEI		
	COUNTY			DESIGNED BY: AG	SHEET NO.		
	NEW CASTLE			CHECKED BY: WM	52		